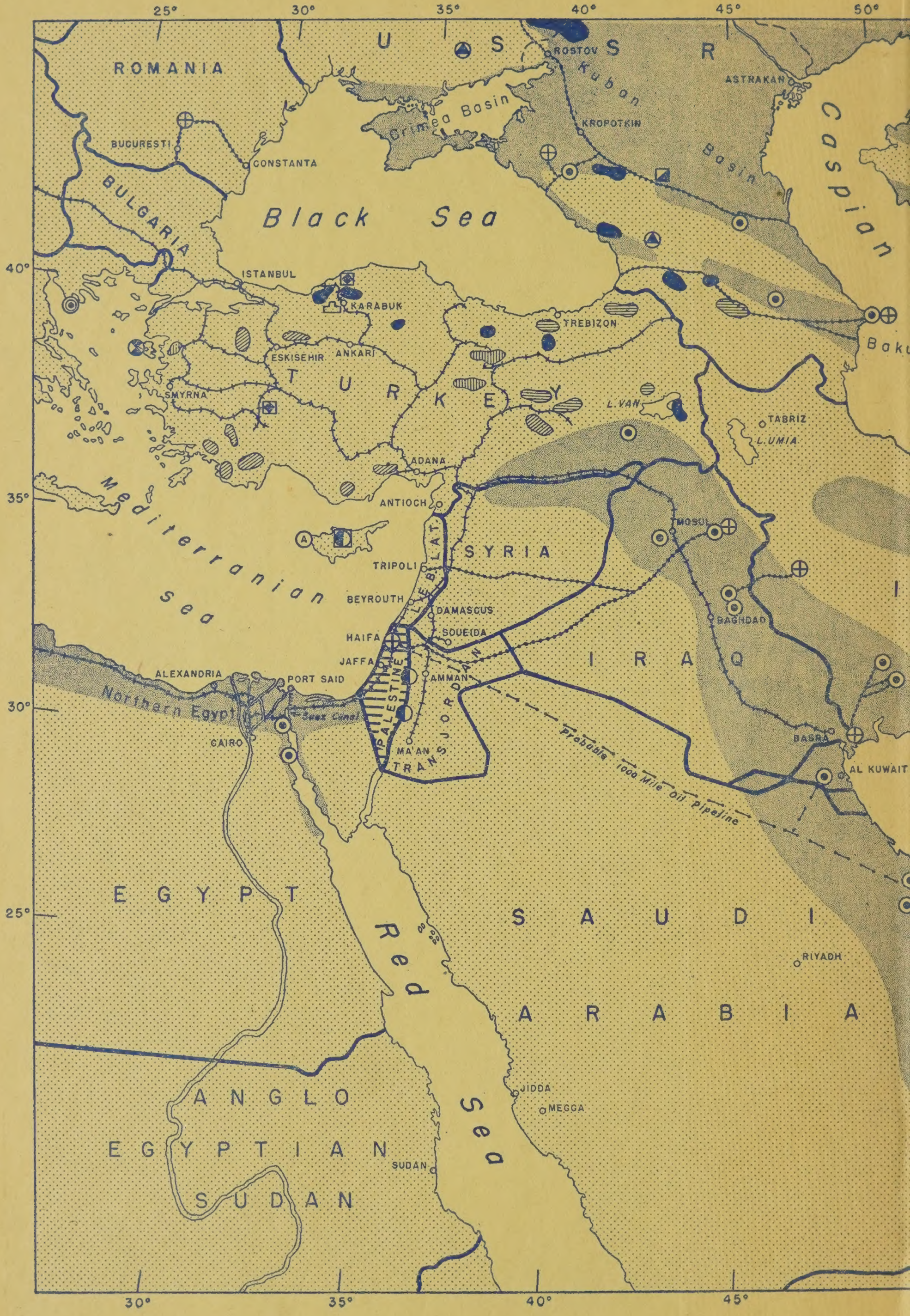
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Suez Canal
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BASRA
AL KUWAIT
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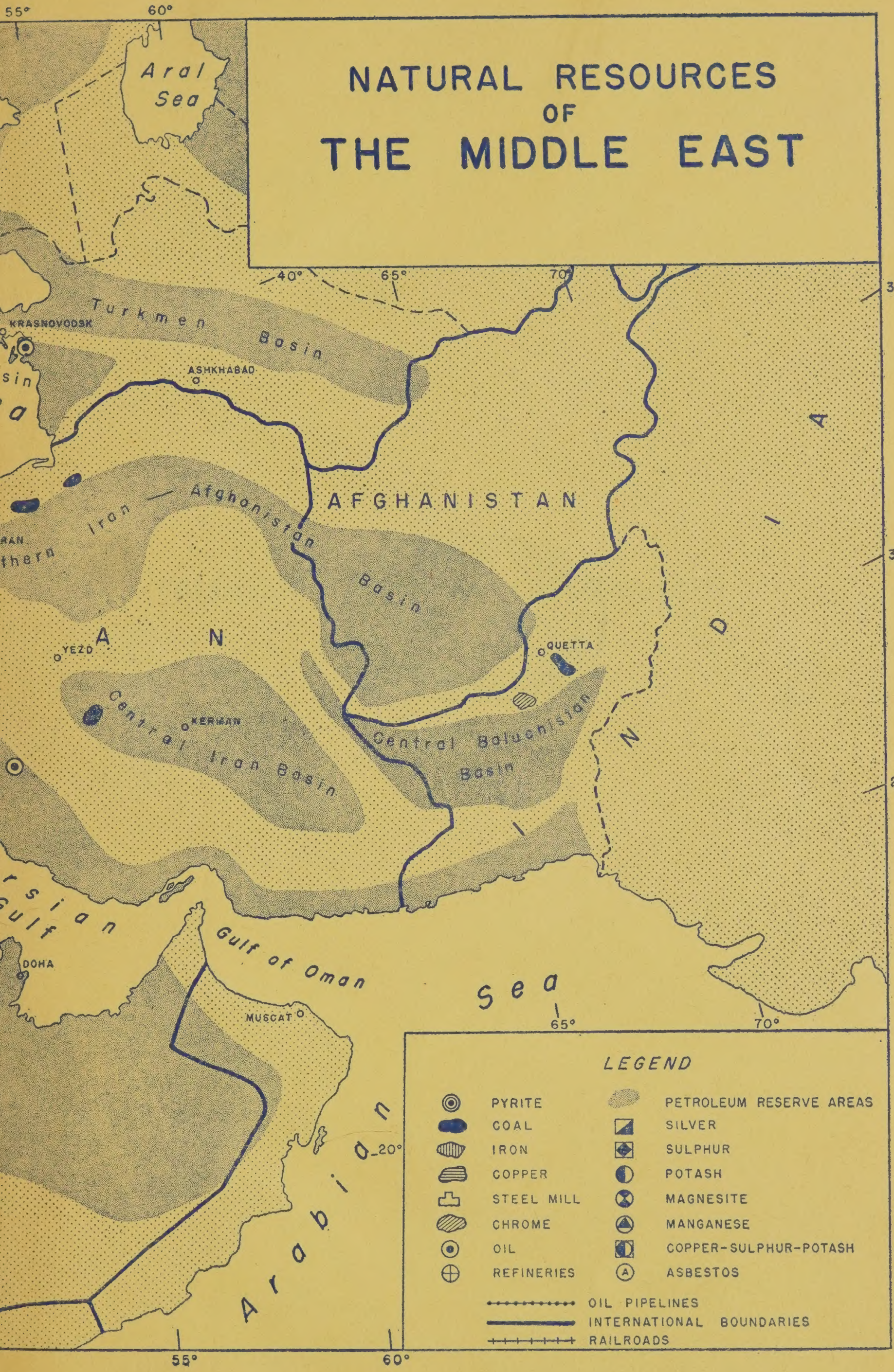
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KERMAN
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PALESTINE: PROBLEM AND PROMISE

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PALESTINE: PROBLEM AND PROMISE

AN ECONOMIC STUDY

By ROBERT R. NATHAN,
OSCAR GASS, DANIEL CREAMER

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INTRODUCTION

Cognizant of the need for an authoritative and objective appraisal of the economic potentialities of Palestine, the American Palestine Institute, a non-partisan research organization, laid the groundwork for this study in 1941. In 1943, after preliminary investigation by the Institute's staff, the services of Mr. Robert R. Nathan were retained for the purpose of preparing and directing this study on the basis of research in Palestine and the United States. It was felt that Mr. Nathan was unusually well equipped for the work involved because of his experience as Director of the National Income Division of the U. S. Department of Commerce and as Chairman of the Central Planning Division of the War Production Board. In April 1945, shortly after his return from Palestine, Mr. Nathan was appointed Deputy Director of the Office of War Mobilization and Reconversion, and much of the burden of the remainder of the work fell upon his associates, Messrs. Oscar Gass and Daniel Creamer.

When the study was completed it was submitted to the Institute's Editorial and Advisory Board, consisting of Professor Arthur F. Burns (Columbia University), Professor Carl Friedrich (Harvard University), President Harry D. Gideonse (Brooklyn College), Professor Eli Ginzberg (Columbia University), President Frank Porter Graham (University of North Carolina), Professor Simon Kuznets (University of Pennsylvania), Professor David A. McCabe (Princeton University), Professor Wesley C. Mitchell (National Bureau of Economic Research), Professor Leo Rogin (University of California), and Professor I. L. Sharfman (University of Michigan). The advice and assistance of the Board is gratefully acknowledged.

The cost of the study was borne by individuals and organizations of varied, even divergent, views with regard to Zionism. However, funds were not accepted from any groups with commitments concerning political Zionism. Among the principal financial contributors to the study were Professor and Mrs. Max Ascoli, Mr. and Mrs. Jacob Blaustein, Mr. and Mrs. M. H. Blinken, the Bulova Foundation, Eddie Cantor, Mr. and Mrs. Jack Kaplan, Edmund I. Kaufmann, Dr. and Mrs. David M. Levy, Judge Irving Lehman (now deceased), Harry Levine, Louis R. Lurie, Andre Meyer, Aaron E. Norman Fund, Lessing J. Rosenwald, David Dewey Stone, Alfred A. Strelsin, Walter Wanger, the United Jewish Campaign of Houston, Texas, and the United Jewish Welfare Fund of Los Angeles Jewish

Community Council. Some of the contributors, it should be noted, have been associated with such organizations as the American Council for Judaism, the Jewish Agency for Palestine, the Zionist Organization of America, the American Jewish Committee, the Palestine Economic Corporation and the Refugee Economic Corporation. As individuals, their views, and those of the organizations with which they have been prominently identified, range from ardent Zionism through what may be called neutrality to a position of opposition to political Zionism. They and the other contributors were as one, however, in agreeing upon the need for this objective study.

Many persons in this country, in Palestine, and in Great Britain —including officials of the Palestinian Government, the Department of State, the British Foreign Office, and the British Colonial Office —have been helpful at various stages in the preparation of the study. The Institute wishes to express its appreciation of their assistance.

Acknowledgment should also be made of the cooperation of the American Council on Public Affairs in handling the details of publication. The index was prepared by Miss Elsie King with the aid of Miss Virginia Bates and Paul Lawson. The maps were drafted by Frank Vereka on the basis of documents graciously provided by F. Julius Fohs. A. Joel Tobias designed the jacket.

It should be noted that although the authors focus their attention on Palestine's economic potentialities, they occasionally express views on matters outside the original scope of this study. Needless to say, neither the members of the Editorial and Advisory Board nor the officers of the American Palestine Institute necessarily share the opinions of the authors; they are, of course, exclusively responsible for their views.

M. H. BLINKEN
President
American Palestine Institute

AUTHORS' PREFACE

This study was initiated in December, 1943, at the instance of Mr. M. H. Blinken, President of the American Palestine Institute. The Institute retained Mr. Robert R. Nathan as a consulting economist to undertake a survey of the potentialities of economic development in Palestine. Mr. Nathan invited Mr. Oscar Gass to collaborate in the survey and to direct such research as might be required. Mr. Daniel Creamer became assistant director of research.

Although the American Palestine Institute furnished the funds required for investigation and travel in the United States, Britain, and the Middle East, the authors bear exclusive responsibility for the analysis and conclusions presented in this study.

The first stage in the investigation consisted of an analysis of published and unpublished materials on Palestine and the Middle East that were available in the United States. In this stage, the authors were assisted by research and analysis undertaken by Miss Blanche Bernstein, Miss Florence Schoenberg, Mr. Frederick S. Straus, Mr. Lawrence Hart, and Mrs. Marjorie Galenson. The authors wish to acknowledge the aid rendered by all of these assistants, and especially by Miss Bernstein and Miss Schoenberg. With the exception of Miss Schoenberg, however, none of these assistants were associated with the inquiry during the period in which conclusions were formulated. None shares responsibility for the views expressed in this volume.

This study is a joint product. The authors spent the months December 1944-March 1945 together in Palestine in continuous investigation and discussion of all aspects of the Palestinian economy. They also constantly exchanged views, on large issues and small, at every stage in their work.

Due, however, to Mr. Nathan's other responsibilities, most recently as Deputy Director of the Office of War Mobilization and Reconversion, most of the burden of research and writing was assumed by Mr. Gass and Mr. Creamer. Mr. Nathan is primarily responsible for Chapters 13, 16, 23, and 26; in the preparation of these chapters, he has been assisted by Miss Schoenberg. Mr. Gass is primarily responsible for Chapters 1 through 11, 14, 19, 21, 22, 24, and 28; he has also acted as general editor of the whole study. Mr. Creamer is primarily responsible for Chapters 12, 15, 17, 18, 20, 25, and 27.

Many persons in Palestine, the United States, and Great Britain have been helpful at one stage or other in the progress of our investigation. A few of them are mentioned specifically in the Notes and Acknowledgments at the end of the book.

We wish also to acknowledge a special debt of gratitude to our most able and conscientious Secretary, Mrs. Adelaide Siegel. Her performance at all stages has been over and beyond the call of duty.

In the preparation of this study, we have avoided any semblance of drawing up a blueprint for Palestinian development. We have no authority to draft such a blueprint. We are profoundly convinced that operating plans must be on an entirely different level of detail than a presentation suitable for general evaluation of economic possibilities. It is to this general evaluation of economic possibilities that we have addressed ourselves. We have attempted to contribute to the clarification of a group of issues which are inherently extremely difficult and in which judgment is most subject to distortion by strong emotional predilections.

ROBERT R. NATHAN
OSCAR GASS
DANIEL CREAMER
Washington, D. C.

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PART I

SUMMARY OF CONCLUSIONS

CHAPTER 1

PROBLEMS AND ECONOMIC POTENTIALITIES

CHARITY OR ECONOMY?

The revival of Palestine during the past quarter century is commonly regarded, in Western countries, as a charitable enterprise sustained primarily by the contributions of Jews living outside Palestine. This view is erroneous. The established population of Palestine is fully self-sustaining.

In the late 1930's, the Jewish sector of Palestine had some excess of consumption over income, indicating the eating-up of capital brought in from abroad. However, this excess of consumption could reasonably be attributed to the transitional needs of immigrants not yet fully adapted to Palestine.

During the six war years, the inflow of immigrants diminished and economic activity expanded. Palestine consequently had a sufficient margin over her own minimum needs to lend more than £P 110 million* ($440 million) to Great Britain. This lending amounts to about $250 for every man, woman, and child in Palestine. For a population as large as that of the United States, this rate of lending would come to $35 billion. A country in a position to extend credit on this scale can hardly be regarded as an eleemosynary institution.

It is not difficult to understand why the Zionist reconstruction of Palestine has come to be thought of, in Western countries, primarily as a charitable enterprise. In the past 25 years, the various world Jewish institutions connected with Palestine have spent about £P 40 million. Only about £P 15 million of this went into investment assets.

Many immigrants have reached Palestine entirely without possessions; they have had to be assisted until they could stand on their own feet. Since the Jewish population was determined to achieve a Western standard of living, it had to develop types of agriculture and industry that were new to Palestine. Experimental losses in the new enterprises were covered partly by world-wide Jewish contributions.

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*The £P (pound Palestinian) is exchangeable one for one with the £ (pound sterling). During wartime its official exchange value was just under $4.03. In dealing with round totals, we shall use the value of $4.00.

In view of the present weakened and destitute condition of most prospective Jewish immigrants into Palestine, large non-income-earning expenditures will be required again if there is to be large immigration during the next decade. In the absence of such expenditures, a Jewish majority in Palestine is unattainable.

ARABS AND JEWS

The basic feature of Palestinian life is its division into two communities, Arab and Jewish, with two economies, two cultures—and two sets of political aspirations. The separation of the two communities is continuous; open conflict is episodic. The longest period of overt strife occurred in 1936 to 1937; there was no such strife during the war years.

Zionist reconstruction has brought the Arabs of Palestine a higher standard of living than is found elsewhere in the Arab Middle East. Jewish demand has provided an important market for Arab agriculture and Jewish enterprises have provided some employment for Arab labor. Jews paid Arabs perhaps £P 15 million for the 380,000 acres of land (6 percent of the area of Palestine) in Jewish ownership at the end of 1943. Jewish tax payments have been the principal support of the services in health, education, agriculture and public roads furnished to the Arabs by the Government of Palestine. The Arabs are healthier, longer-lived, and more numerous because of Jewish accomplishments.

It may be that the Arabs ought to be grateful for the benefits brought them by Jewish immigration. In fact they are not grateful. The organized and articulate Arabs are united in favoring the termination of Jewish immigration and the establishment of a national Arab State. They are prepared to forego economic benefits to accomplish these objectives.*

No reliance can be placed upon prospects of inducing the Arabs of Palestine to leave the country to the Jews and migrate voluntarily to the underpopulated areas of Transjordan, Syria and Iraq. Only the most lavish compensation could induce any substantial number of Arabs to go to countries with a lower standard of living and for which they have no attachments.

Peace in Palestine cannot be foreseen realistically except in terms of greater success of Arabs and Jews in living together and working together. Under the best of circumstances, general close collaboration cannot be anticipated in the near future. For short-term purposes, it is necessary to plan in terms of two markets and two labor forces, with a certain amount of "international" trade and migration. Joint projects of agricultural intensification and modernization seem to be the most promising area for immediate close cooperation. Arabs might also be employed fruitfully on Jewish construction, at the higher Jewish wages.

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* A detailed discussion of these issues appear on pages 65 ff. and 75 ff.

Collaboration of Jews and Arabs in the development of Palestine can be conceived only within the framework of a basic political program backed by all the moral and material authority of the United Nations. That basic program needs to be enunciated soon and maintained firmly despite conflicting purposes and the assaults of terrorism. Prolonged open conflict, such as existed in 1936-37, would make it impossible to achieve the development goals otherwise attainable during the next decade.

From an economic point of view, there can be no question that the Jews have been a great progressive force in Palestine. Over time, the country can certainly afford a self-sustaining livelihood to a much larger number of them. They can serve the whole Middle East as a progressive, Westernizing influence in the development of modern industry, scientific agriculture, education, and political democracy. They can be an outpost of Western culture without being an outpost of Western imperialism.

IMMIGRATION POSSIBILITIES

Given a political settlement that makes rapid economic growth possible by opening the country to immigration, the basic factors that will determine how great an economic development Palestine achieves during the next decade are—*a*: the supply of capital; *b*: the quality and range of enterpreneurial ability; *c*: the skill and adaptability of the labor force; *d*: the initiative and effectiveness of Government in mobilizing resources for development; *e*: the freedom of access to foreign markets; *f*: the growth of collaboration between the Arab and Jewish communities; and *g*: the drive of expulsive forces pushing Jews out of other countries and the pull of national sympathies attracting them to participate in Zionist reconstruction.

In the very short run, *a* is the most important factor; capital can be substituted for time. Yet even the most lavish supply of capital, by itself, can create only the appearance of economic progress. In the middle term, *b, c, d, e* and *f* are governing; they will determine the standard of living that can be sustained. In the very long run—looking even beyond the next decade—*g* is the most important factor; in historic perspective, it outweighs all others.

Because of the character of these basic limiting factors, it would be mere folly to attempt to draw a firm "blueprint" of the number of Jewish immigrants that Palestine can "absorb" during the next decade. We suggest a thoroughly experimental approach to the number who should be admitted to the country—an approach governed by a sympathetic attitude towards immigration and by experience of unemployment, the trend of living standards, the expansion of permanent economic activities, and the need for refuge from persecution.

Nevertheless, for many purposes it is valuable to have a reasoned judgment of the number of Jewish immigrants who could be absorbed into self-sustaining economic activities during the next decade, however fallible that judgment may be. It is our judgment that, having regard to the character of the immigrants and all the attendant circumstances, 615,000 would be a low estimate for the next ten years, while 1,125,000 would be high but not unattainable under very favorable circumstances. This judgment assumes the goal of a stable average standard of living for the Jewish population and the continuance of the slow rise in the Arab standard.

On our lower immigration limit, Jews would constitute only about 43.5 percent of the total population of Palestine even at the end of 1954. On our higher limit, Jews will constitute about 51.0 percent. Even in the latter case, because of the greater Arab rate of natural increase, further Jewish immigration would be required for Jews to remain a majority.

Very roughly £P 50 ($200) per immigrant will be required for transportation to Palestine and maintenance on the way and in Palestine. This rough figure is based on the assumption that the average period between arrival in Palestine and absorption into self-sustaining activity will not exceed three months, except in the case of children orphaned or separated from their parents. Such children would require an additional outlay of roughly £P 235 ($940) for an average four-year period of care. We conjecture that of an immigration of 615,000 about 30,000 might consist of orphaned children, while in an immigration of 1,125,000 they might number 50,000. On this basis, the total cost of immigration would range between £P 37.8 million and £P 68.0 million ($151 million to $272 million). It is doubtful whether the potential immigrants will be in a position to meet more than a small fraction of this cost.

We must emphasize that we are dealing with an immigration of a magnitude and rate that could be self-sustaining, with the exceptions noted. We have not dealt with the costs—or the other administrative and economic problems—that would result from a decision to transport many hundreds of thousands of Jews to Palestine in a matter of months, where they would necessarily have to be maintained for a prolonged period on a non-self-sustaining basis.

NATURAL RESOURCES

Palestine's supplies of land, water, and other natural resources are not the basic factors determining how great an economic development she will be able to achieve during the next decade. Over a longer period, these resources will permit a much greater expansion than can be achieved in the next ten years.

Land in Palestine is scarce and many times as expensive as in the United States. But the scarcity is due not only to the smallness of the country (10,429 square miles) but also to superficial agricultural use, retardation of irrigation works, and Government regulations making it necessary for Jews to concentrate their purchases in a very limited section of the country. With proper agricultural intensification and abandonment of these constricting regulations, there will still be large reserves of land in Palestine at the end of the next decade, available for more intensive use when market conditions warrant.

The exploitable water resources of Palestine are also substantially in excess of what it seems possible to utilize during the next decade. At present only about 100,000 acres are under perennial irrigation. There is enough water in the country to irrigate at least another 750,000 acres, but our optimistic estimates of agricultural expansion indicate an economic requirement during the next ten years of only between 325,000 acres and 437,500 acres. Preliminary engineering studies show that (taking the lower-cost projects first) 325,000 acres could be irrigated at a capital cost* of about £P 16.3 million ($65 million), while the irrigation of 437,500 acres would cost about £P 28.8 million ($115 million).† In both cases, water could be sold economically for a maximum of £P 2.8 ($11.20) per 1,000 cubic meters.

Fuel and power could also be supplied at costs competitive with those prevailing in all but the most favorably situated regions of the world. Her location at the refining and shipping terminus of the Iraq petroleum pipeline gives Palestine a position to enjoy low fuel costs. However, at present her fuel costs are very high, due to the tender regard of successive British governments for the profits of the petroleum monopolists. This monopoly stranglehold is not a fact of nature and can presumably be broken, in time, to Palestine's great economic advantage.

Moreover, in connection with such expansion of irrigation as may ultimately be required, some 225,000 kilowatts of hydroelectric power could be developed in Palestine and on the Litani within a few miles of the Palestine border. Preliminary studies place the capital cost (including transmission and distribution facilities) at very roughly £P 41 million ($164 million) and suggest that the resulting electric power could be sold wholesale at about 1.0 U. S. cent (2.5 Palestine mils) per kilowatt hours. This rate would be about 20 percent lower than the price charged by TVA to municipalities and cooperatives, though it is higher than TVA's price to large industrial users.

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*All values expressed in prices 25 percent above prewar in U. S. dollars or 50 percent above prewar in the already devalued £P.

†These capital costs exclude installations in the fields, costing about £P 9.8 million for 325,000 acres and about £P 13.1 million for 437,500 acres; field installation costs are included below in the cost of equipping agriculture.

With respect to other natural resources, while Palestine has an average endowment, she is dependent primarily—like any other area of 10,400 square miles—on imports. There is no reason to believe that access to the requisite imports will be a major limiting factor in her economic growth. She is developing an industry based on skills and special regional market opportunities. For such an industry, possession of local sources of metals and minerals is not of decisive importance.

AGRICULTURAL PROSPECTS

Both Arab and Jewish agriculture have made great progress during the past quarter century. Yet, even in the best years, the Arab peasant has enjoyed a standard of living that is good only in contrast with the brutish poverty common in the Arab Middle East. Even the Jewish farmer has as yet achieved only a very modest manner of living, by Western standards.

The Arab farmer is turning away from subsistence farming toward supplying urban markets. His agriculture differs from that of a quarter century ago in placing less emphasis on the low-yielding cereals and more on the vegetables, fruits and olives that are better adapted to his soil and climate. He has relatively fewer sheep and goats and more cattle and poultry. Wartime inflation has freed him, perhaps for the first time in centuries, from a burden of debt that amounted often almost to debt slavery.

The Arab farmer still needs a land reform that will give him a consolidated, workable holding. He needs cheap Government credit to enable him, over many years, to acquire clear title to the land. He needs irrigation and training in the care of irrigated cultures. A reasonable goal to improve his position during the next decade might involve semi-intensive development of an additional 125,000 acres of irrigated land for Arab diversified farming, a further growth of about 70 percent (22,500 acres) in Arab citriculture, and a modest beginning (4,250 acres) with other export crops. The farm capital required for these purposes would be about £P 16.5 million ($66 million).

With the improvement of the productivity of Arab farms must come a steady reduction in the percentage of the Arab labor force employed in agriculture. The Arab farm community already suffers —like almost all backward rural economies—from underemployment, which cannot be reduced in a manner compatible with steadily rising per capita income except by the expansion of urban occupations.

Jewish agriculture has won solid ground after great hardship, underequipped, working with a labor force previously without experience in farming and on land much of which was formerly regarded as uncultivable. Both in specialized commercial farming and in diversified farming, adaptations have been made reflecting a growing appreciation of Palestine's basic natural conditions and the resulting market limitations. The characteristic specialized farm is the citrus grove. The characteristic diversified farm is primarily a dairy and poultry farm, with lesser emphasis on vegetables and potatoes, fruits and cereals. Agricultural skills have reached the level where a "fully-equipped" diversified farm can now aim at earning £P 135 to £P 150 ($540 to $600) per worker.*

The most promising new direction in Jewish farming is the development of further export specialties to supplement citrus. With respect to the production of fruits, vegetables, seeds and flowers, Palestine could supply European markets as California does the United States.

Yet, even with the energetic exploitation of these export opportunities, agriculture probably must occupy a less important permanent place in the total Jewish occupational structure than it did in the 1930's.

The 19 percent of the total Jewish population gainfully employed sustained by agriculture in 1939 reflected low productivity and low incomes. With mass immigration of unskilled labor, productivity will no doubt again fall temporarily, and the agricultural employment ratio will rise. For the longer pull, however, 12 percent to 15 percent of Jewish employment seems an optimistic estimate of the role of agriculture in the total Jewish occupational structure. This compares with 16.6 percent of the U. S. labor force employed in agriculture on April 1, 1940.

With mass immigration, between £P 42.5 million and £P 56.5 million ($170 million to $226 million) would be required to equip Jewish farming for the next decade. About £P 12.5 million would be required for a 90 percent (27,500 acre) growth in the citrus area, about £P 5 million for other export farming, and between £P 25 million and £P 39 million for the equipment of diversified farms.

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*In "postwar" prices 25 percent higher than prewar in dollars and 50 percent in £P.

MANUFACTURING OUTLOOK

The most important structural change in the Palestinian economy during the past quarter century has been the establishment of modern manufacturing. This development is due primarily to Jewish enterprise and capital. In 1943 about five-sixths of the total gainfully occupied in manufactures were employed in Jewish-owned enterprises. While the Jewish population of Palestine increased over five times between 1921 and 1943, employment in Jewish-owned manufactures (including handicrafts) increased ten times.

In 1939 about 17.0 percent of the Jewish labor force was employed in manufactures (compared with 20.3 percent in the United States on April 1, 1940). Under the stimulus of wartime opportunities, employment of Jews in manufactures rose to 25.6 percent in 1943. The occupational structure of the Jewish community of Palestine is, therefore, broadly similar to that of the United States.

As manufactures have expanded, the range of products has widened, and the representative manufacturing enterprise has become larger and more mechanized. In 1937 only 16 manufacturing firms employed over 100 workers; in 1942 there were 50 such firms. Even in 1937 the Palestinian Jewish manufacturing worker was equipped with an average of $1,330 of capital (apart from the value of land and buildings); the United States worker had only $1,900 worth. During the late 1930's Palestinian industry was engaged primarily in the production of simple consumer goods and building materials for local markets, and its only important manufactured export was potash. Now it produces most of its own requirements of manufactures and exports (in addition to potash) other chemicals, finished diamonds, drugs, cosmetics, fruit juices, quality wearing apparel and a variety of other articles.

The progress of Arab manufactures has been much more limited. While some mechanization in producing commodities already made by Arab manufacturers is to be anticipated, there is no current basis for distinctively new lines of Arab manufactures. The requisite entrepreneurial ability and skilled labor force is lacking. The expansion of Arab manufactures will, at best, make only a very modest contribution to the increased urbanization of Arab occupations during the next decade.

There does, however, exist a firm basis for further expansion of Jewish manufactures. Such manufactures should be able to expand their regional and world markets and to supply many commodities imported before the war. It will be much easier to develop a local manufacturing industry to displace imports for a Jewish population of 1,800,000 than for a population of 600,000. Given an expanded local base, it will also be easier to supply neighboring regional markets. On the upper and lower limits of our assumed immigration, there is firm ground to believe that Jewish manufactures could employ 19 percent to 21 percent of the Jewish labor force. To do so, however, would require an expansion in their capital by between £P 35 million and £P 50 million.

CONSTRUCTION REQUIREMENTS

Palestinian housing today is meager and poor. In 1944, after the accumulated shortages of the 1930's had been aggravated by the wartime ban on private construction, 50 percent of the Jewish people of Tel Aviv were living 3 persons or more to a room.* Arab urban overcrowding was slightly less acute, but the Arab rural standard was even lower. A Jewish collective farm also was considered to be well-established if it could afford a small room for each couple.

Non-residential buildings are, with few exceptions, very modest. Private commercial and industrial buildings are, at best, adequate. Public buildings, apart from police stations, are conspicuous by their absence. School buildings, where they exist, are generally of a quality to stimulate concealment rather than display. The outstanding achievements in public construction are the road system and the port of Haifa. Government has done nothing toward the financing of low-cost housing.

Our projection of Palestinian housing needs for the next decade is based on an *average* of two persons per room. Given existing income differences, this average means that perhaps one-third of the population would still have less than one room for each three persons. On this basis, total capital requirements for housing would be £P 198 million on our lower immigration limit and £P 265 million on our higher limit. On a similarly modest basis, non-residential construction (excluding the requirements included above for irrigation, power, farms, and factories) would cost between £P 85 million and £P 127 million.

A construction program of this magnitude involves grave dangers for the sustained progress of Jewish economic development in Palestine. With the continued separation of the Arab and Jewish labor forces, total construction (including housing, irrigation, power, farms, factories, etc.) would demand 14 to 18 percent of all Jewish man-hours of labor during the next decade. (This ratio compares with 10.6 percent of the total Arab and Jewish labor force employed in all construction in the war-boom year 1942 and with 4.6 percent of the U. S. labor force so employed in the peacetime peak construction year 1926.) Much of the best Jewish labor and management would inevitably be drawn away from the more permanent economic activities that must sustain employment after immigration tapers off.

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*Rooms exclusive of kitchen, bath and toilet.

Partial alleviation of this temporary pressure can be found in the employment of Arab labor, at standard Jewish wage rates, on Jewish construction. Other alleviation must come from the deferment of all but the most vital construction—when construction demands create difficulties for manufactures, agriculture and basic services. It will be most difficult, however, for a development authority to defer construction. The temptations of temporary absorption of a large number of immigrants into a construction boom will be almost irresistible.

THE ROLE OF GOVERNMENT

The British and Allied statesmen who were primarily responsible for the establishment of the Palestine Mandate—Lloyd George, President Wilson and Lord Balfour—shared a conception of Government which involved a positive responsibility for social and economic betterment. That conception has not been conspicuous in the actual operation of the Government of Palestine. The primary concern of the Government of Palestine has been "the maintenance of law and order"—an endeavor in which it has not been brilliantly successful.

Economic expansion of the order that will be required to absorb 1,125,000 Jewish immigrants into productive activity during the next decade—while raising the standard of living of the Arab population—is quite inconceivable without a new, aggressive leadership by Government. A more intensive agriculture must be developed, which will require Government assistance in land reform, research, training and financing. Irrigation, on which Government has done almost nothing for a quarter century, will have to become a primary area of Government activity. Fuel prices, power rates, and the possibilities of developing lower-cost power—from both thermal and water sources—will need to become Government concerns. Government will have to develop an active commercial policy to secure equal access of Palestinian products to foreign markets and to prevent foreign dumping in Palestine. To narrow the social cleavage between the Arab and Jewish peoples, the standard of Arab health services (supplied by Government) will need to be raised gradually to the level that the Jews have provided from their own resources. Most fundamental of all, the education of the Arab population, at present 70 percent illiterate, will have to undergo a revolutionary expansion.

The present Palestinian fiscal system is inequitable and of a character to act as a disturbing rather than a stabilizing factor with respect to the general level of economic activity. The monetary system has never been conceived as an instrument of development policy. The fiscal and monetary arms of Government are its chief instruments of economic activity. If these are conceived in a timid or inadequate manner, the resources of the economy cannot be mobilized effectively for development.

It cannot, in all candor, be said that the Government of Palestine has been imbued with more than the faintest conceptions of the large and bold innovations in domestic and international economic policy that will be required if rapid economic growth is to be assured in the next decade.

REQUIREMENTS AND SOURCES OF CAPITAL

Capital will be required in Palestine during the next decade (a) to equip the natural growth of both the Arab and Jewish populations, (b) to raise the productivity of the Arab population, and (c) to provide houses, farms, factories, etc. for new immigrants. (We assume for the Jewish population only such equipment as would be required to maintain their standard of living at the prewar level.) In the case of net immigration of only 615,000 Jews, about £P 475 million ($1,900 million) of capital would be required, while if Jewish immigration reached 1,125,000 the capital required would be approximately £P 675 million ($2,700 million).

These capital requirements are exclusive of the amounts that Jews will have to pay Arabs for land. The fixing of an equitable level of land prices and the securing of adequate land transfer for development purposes are perhaps the most delicate questions of public policy that a development-minded Government must confront in the next decade.

The table on the next page gives a summary statement of the purposes for which capital will be required.

Including her prewar holdings, Palestine now owns sterling balances of approximately £P 125 million. Some £P 25 million to £P 35 million of this may be needed as an exchange reserve, but £P 90 million to £P 100 million will be available for investment if British exchange and trade controls permit. In this respect, as in so many others, Palestinian development during the next decade is dependent on active British cooperation.

Palestine may be in a position to save between 7½ percent and 15 percent of her annual National Income. This saving would amount, over the decade, to roughly £P 75 million to £P 150 million at the lower limit of immigration and roughly £P 90 million to £P 180 million at the higher limit.

CAPITAL REQUIRED FOR PALESTINIAN ECONOMIC DEVELOPMENT IN THE POSTWAR DECADE

(*In millions of £P, at prices 150 percent of 1935-1939*)

	With a Jewish immigration of 615,000	*With a Jewish immigration of 1,125,000*
Immigration services	38	68
Irrigation	16	29
Power installations	27	41
Agriculture	59	73
Manufactures	35	50
Housing	198	265
Other construction, transport, trade and services	100	147
TOTAL	473	673

Assumes non-Jewish immigration equal to 10 percent of total.

In a peaceful expanding economy, something like £P 35 million to £P 40 million of private foreign capital might be attracted for investment in factories, international trading companies, hotels, tourist facilities, housing, etc. This capital would come from individuals, corporations, insurance companies, banks, etc.

The Jewish people outside of Palestine can be counted upon to make a free-will offering of something like £P 30 million.

At the higher immigration limit, these sources of capital would still leave a deficiency of between £P 325 million ($1,300 million) and £P 425 million ($1,700 million). Should as many as 1,125,000 Jews—principally from Europe—wish to reconstruct their lives in Palestine, they would have the strongest claim to receive this amount from Germany as reparation. It was against the Jewish people that Germany committed its greatest crimes. Jewish losses from Nazi aggression have been incomparably greater than those of any other people.

Yet, if reparations should be apportioned on the basis of military and political power rather than damage and need, Jewish reconstruction may have to borrow the capital that it should receive as reparation. Apart from the private capital included above, the only large lenders, for some years, will be the International Bank for Reconstruction and Development and the public lending institutions of the Government of the United States. In the event of the denial of its reparation claim, Jewish Palestine will have to join borrowed capital from these institutions with its own capital. It will have to secure intermediate-term loans for agriculture and manufacturing equipment and long-term loans for irrigation, power, railroads, ports, etc.

The terms on which capital is provided for Palestinian development during the next decade will have a profound influence on the magnitude of the economic expansion that can be achieved. They will also provide a fundamental test of the good will of the Great Powers in international rehabilitation and reconstruction.

BEYOND THE POSTWAR DECADE

Opportunities for economic progress in Palestine will not have been exhausted at the end of the postwar decade. No natural barrier sets a tight limit to further advances.

At best, at the end of the postwar decade the standard of living of the Arabs of Palestine will still be much lower than that of Jewish Palestine today. Industrial workers' skills, scientific technology and modern management capacity will still be rarities in the Arab community. It will take at least a quarter century to raise Arab standards of health and education to the present Jewish level. The influence of the Jews can accelerate Arab progress, but it cannot, in a decade, eradicate the consequences of centuries of backwardness.

The Jews, too, though progressive and Western in technique, will be poor by the standards of the United States or the United Kingdom. Jewish Palestine is so intent on attaining at least approximate equality of numbers with Arab Palestine that, during the next decade, it will aim at a large self-sustaining population, rather than a smaller population with better equipment and a higher standard of living.

If all political limits on Jewish immigration into Palestine are removed, it may be that—by the end of the next decade—the peak of the inflow will have passed. Emphasis on absorbing a larger number of immigrants may diminish, and emphasis on achieving higher per capita income may increase. At this stage, Palestine may be in an even better position than during the next decade to give constructive economic service to the whole Middle East.

PART II

PERSPECTIVES IN TIME AND SPACE

CHAPTER 2

MIDDLE EASTERN SETTING

WORLD INFLUENCES

Because of its geographical position as a land bridge between Africa, Asia, and Europe, the Middle East has participated in world movements originating in all three continents. The region has served as a base for empires—Phoenician, Persian, Arabic and Turkish—that have extended far around the Mediterranean and into the land mass of Europe, Asia and Africa. The Middle East has, in turn, been the pawn of empires—Greek, Roman, Mongol, and contemporary—of which the primary strength lay elsewhere.

The Middle East was restored to the central stream of world politics, at the very end of the eighteenth century, by rivalries over the weakened Ottoman Empire. In 1798 Napoleon conquered Egypt and marched up the Palestine coastal plain to Syria. Britain seized the initiative to draw the Sultan into an alliance against Napoleon.

A tangled thread of Middle Eastern policy runs through Franco-British relations from then to this day. It made France the patron of the Lebanese Christians and inclined British support to the fiercely anti-Christian Druses. It brought Britain to Acre to defeat the forces of the insurgent Mehmet Ali, the great Pasha of Egypt, and to prevent the collapse of Ottoman rule. It brought the France of the Second Empire, in the role of guardian of the Roman Catholic ecclesiastics in the Holy Places, to war in the Crimea against a Russia posing as the guardian of Orthodox rights.

After a long series of agreements, throughout the nineteenth century, designed to avoid the problems that would arise from a Turkish collapse, the War of 1914-18 found Russia, Britain and France joined in plans to partition all but the central heart of Turkish territory—with a few scraps provided also for Italy and Greece. Russia, however, eliminated herself voluntarily from the benefits of these plans by the Revolution and her separate peace with Turkey.

Not until World War II, when she decisively threw back the the German offensive towards the Caucasus, did Russia reassume her full position as a Great Power in the Middle East. Today her prestige in the region is perhaps greater than that of any other world power. Her influence is particularly strong on her own neighbors, Turkey and Iran, but it is also potentially strong elsewhere. The sources of her prestige are two: first, her imposing military accomplishments, and second, her successes in dealing with the problems of development of backward peoples within her own frontiers. On the other hand, there are basic limitations on immediate Soviet strength in the Middle East in the current political impotence of the masses and the intense fear of Communism among the governing classes. Moreover, the Middle Eastern countries do not wish merely to exchange French and British masters for Russian ones.

France and Britain were the principal heirs of the Ottoman Empire in the Middle East—the lion's share going to Britain. France claims equality of status in the region with any other world power because of her "historical connection" reaching back to the Crusades. French is the cultural language of the region, and its young nationalisms have fed on French (and American) models. But her political and economic position in the Middle East has never been basically strong during the last quarter century. France has never been sufficiently interested in the Middle East to pursue an active development policy there. Moreover, from the days of the episodes candidly recited by T. E. Lawrence to the present, one element of British policy has embraced the elimination of French influence from the Middle East. French political influence was, in fact, almost completely eliminated in World War II. It may be, however, that amicable Anglo-French relations in Europe and other areas will require that France be given back a shred of "special position".

At present, Great Britain is the strongest world power in the Middle East. She holds mandates over Palestine and Transjordan, has special treaties with Egypt and Iraq, exercises military occupation in parts of Iran, Syria and Lebanon, and has an alliance with Turkey. Moreover, she has important investment interests throughout the area; she is its huge debtor on blocked sterling account; and she commands the sympathy of its conservative social opinion. It may be, however, that—for the very long term—the strength of this position is more apparent than real. It is commonly believed in the United States that Britain's strength in the Middle East has been undermined by a record of thorough-going exploitation. We believe this charge to be untrue—though Britain does assist her own business interests and does protect the vested rights of large British companies. The real weakness in Britain's position derives, in our judgment, from her lack of imagination and drive in development work. It is easy for the domestic upper classes of the Middle East to arouse the masses to political demonstrations against Britain under the slogan of freedom from the foreign yoke because nothing that Britain has done for any of her wards strikes the popular imagination as reflecting a profound concern about transforming them into a literate, healthy, prosperous, self-reliant people. It may be therefore that—in the very long run—Russian appeal to the masses will prove a greater source of strength in the Middle East than Britain's political ties, her business interests, and her social hold over the upper classes.

THE DESERT BACKGROUND

The dominant fact of the economic life of the Middle East is aridity. Of its total area of 2.6 million square miles, less than one-quarter receives an average annual rainfall of over 5 inches (125 millimeters). Only in some of its coastal plains and highland valleys are there broad stretches of land that receive enough rain to be cultivated fairly intensively without irrigation. In ancient Egypt and Mesopotamia (the modern Iraq) great States were established on the basis of a highly developed irrigation system. In Egypt the continuity of large-scale irrigation has never been broken, and a large population has persisted along the thin green ribbon created by the Nile (and the work of man) in the waste of the Egyptian desert. In Mesopotamia the irrigation system has been broken down by political disorders, population has declined to less than one-fifth of its ancient peak, and most of the country—though named by historians of the ancient world, the eastern horn of the Semitic "fertile crescent"—has now reverted to the desert. It is no wonder that in Semitic mythology the magician is the man who can divine water, and the great magician is the one that can strike water from the rock.

On the eastern border of historic Palestine, the line of the desert is indicated fairly accurately by the Pilgrim Railroad, which ran from Damascus through Amman and Maan to Medina. At many points, the desert begins a few miles to the west of the railroad line. Measuring from the great rift in which lie the Jordan, the Dead Sea, and the Wadi Araba, the desert is commonly less than 30 miles to the east and rarely as much as 40 miles. Never, along the eastern march of historic Palestine, is the desert more than 100 miles from the Mediterranean.

Even within this boundary there are large semi-desert areas (with an average annual rainfall of less than 5 inches), such as the Negeb of Palestine. Enthusiasm and archeological error have attributed to the Negeb a history of abundant population, which modern hydrological engineering may give it in the future but which it has never supported. Judicious scholars, such as W. F. Albright, have concluded that the famed cities of the Negeb flourished at different times during a period of nearly 1,000 years. There were never more than one or two large towns at the same time, and these towns lived partly from the caravan trade. The desert was beaten back by ceaseless effort. Almost every house was equipped with cisterns. Reservoirs and dams were built whereever possible, to make the most of the meager rainfall. Wells were dug to tap the underground waters. In its most flourishing period, the Negeb may have supported a settled population of several tens of thousands of people.

The ancient Semitic homeland extends from the southern shore of the Arabian peninsula to the northern limit of the "fertile crescent" in Mesopotamia and Syria. Everywhere in this area the nomadic herdsman, who pastures his flocks in lands too arid to support agriculture, is a near neighbor. The annual nomadic cycle brings the desert herdsman into periodic contact with the settler. But the strife of Cain and Abel is between them. When government is weak, the nomad raids into the sown. Several times historically in Palestine he has conquered and settled. His goats and his camels are the enemies of the farmer. They break into gardens, eat the branches of trees, despoil the rocky land of its scant herbage, and so cause it to erode. On the other hand, the farmer is ceaselessly engaged in an effort to extend the sown at the expense of the herdsman's pastures. He claims wells and denies ancient grazing rights. It is the wisdom of the Bible, uncommon in written history (for history is written only by the sown), that it makes Cain the farmer the murderer of Abel the herdsman. The farmer calls the nomad an Ishmael, a wild man whose hand is against every man, and therefore why should not every man's hand be against him? The farmer sets watchers on the hillside, in times of weakness he pays tribute to the nomad, and in times of extreme weakness he abandons the valleys which are too open to nomadic raids. Such has been the history of the relation of Palestine with the lands to the east for at least three thousand years.

Nomadic life has dominated the Semitic desert lands since about 1100 B.C., when the camel appears to have been first domesticated. It was a life of continuous raiding and intermittent tribal warfare, quelled only for relatively short periods by the emergence of strong regional powers. Theft of camels and trespass upon pastures were the most frequent origins of tribal wars. Robbery with violence was recognized to be legitimate by the desert, whether directed against other tribes, travelers, or settlers. The desert loved a great robber and a great fighter. Auda abu Tayi, Lawence's collaborator, was famous for having drunk his enemy's blood and eaten his heart. Robbery was so general even in the decade before World War I that Moslems did not refrain from charging the Sherif of Mecca with conspiring with the bedouin to rob the pilgrims to Mecca and to share the booty. The bedouin lived in a constant state of war for, even if the surest guarantees of peace had been arranged with neighboring tribes, a raiding party might suddenly swoop down from 100 miles away, drive off the herds, and leave the defeated tribe to die of starvation.

The domestication of the camel gave the bedouin great mobility. He could travel 1,500 miles over the desert in 30 days, with a 30 to 40 lb. sack of flour tied to the camel as his only food. The camel can go 250 miles in three summer days without water, where a single day's travel will kill a horse. The bedouin can therefore raid quickly and—if need be—run. Before the days of motor roads across the desert, before armored cars, radio and airplanes, it was hard to organize a quick and effective pursuit.

The kings of Israel and Assyria (and later the Persians and Romans) sent armies into the desert to subdue the warring tribes. They established frontier posts all along the line where the Transjordanian highland dips to the desert. When central government weakened, however, the bedouin broke the frontier and resumed his ascendancy over the villager of the sown. As late as 1921 some 3,000 bedouins on camels raided into Transjordan from Arabia but were broken up by bombing planes and armored cars before reaching Amman.

Throughout history a constant increase or decrease of population can be observed on the edge of the desert. When governments are strong enough to guarantee security of life and property, the herdsmen of goats and sheep are transformed into farmers; they build cottages, hamlets come into existence, and the semi-nomad becomes a peaceful settler. He entrusts his goats and sheep to the care of friendly clans of bedouins, who do not go back to the inner desert but are themselves transformed into semi-nomads. On the other hand, if there is no strong government in the sown, security of life and property disappears. There follows a decrease of population. In the valleys open to raids, settlements are abandoned. On the frontiers of the sown, the permanent house is exchanged for the movable tent. The farmers become semi-nomads.

It is the boast of the Western civilization of the twentieth century that this oscillation of the desert and the sown is being resolved, by its power, for all time, in favor of the sown. The camel markets of Egypt, Palestine, Syria and Iraq—whose demand determines the population that the deserts can support—are being extinguished by the automobile and the hard-surface motor road. The armored car and the light bomber, with their machine guns, pursue the bedouin into the desert, matching raid with swifter counterraid. The farmer, with every greater knowledge and use of water sources, pushes the margin of the sown out into the desert.

The friends of the bedouin have recognized the writing on the wall. Everywhere in the Middle East they are encouraging him to become a settled farmer. By the standards of his pinched life, any cultivable land is flowing with milk and honey. Yet the adjustment is not easy. In much of the Middle East the peasant cultivator carriers the stigma of six centuries of serfdom, which came to an end legally only a century ago and has left a profound economic and social heritage. The bedouin does not want to become a serf. Moreover—in contradiction to romantic belief—the physique of the bedouin, sapped by desert privation, is poor. He is physically, as well as psychologically, incapable of hard work. Moreover, he creates trouble in the rural community. He has little respect for life or property. He acquires land by squatting on it. Therefore his infiltration into the settled rural community is a fruitful source of land disputes. His attitudes toward life and property tend to lower an already lax rural public and private morality.

The Middle East's desert heritage is no romantic garland. Contact with the nomadic way of life means a low standard of public security, despite high security expenditures. It means backwardness in land cultivation and a tendency to prefer the less strenuous occupations of the herdsman (or the grain grower, who is idle between seeding and harvest) to the more strenuous, regular work required by intensive cultures. The population that has been driven from the desert by privation is poor in physique and little resistant to disease. Yet the settlement of the bedouin must continue—on a large scale in Arabia, Transjordan, Iraq and Syria. The economic, social and political difficulties of adjusting a nomadic or seminomadic population to settled life must be borne because they are unavoidable.

THE GREAT STATES

The great local States of the Middle Eastern constellation are Turkey, Egypt and Iran. The States of the Arabian peninsula, particularly Saudia and the Yemen, may fascinate the readers of the rotogravure sections or excite the interest of oil prospectors. Iraq may set a pattern of aggressive Arab nationalism and of the drift toward authoritarian government in the Arab world. The

Lebanon may lead all Arab lands in receptivity to Western influences. These lesser States, are, however, too poor, too decentralized, or too small to hope to exert much influence beyond their own frontiers. Economic development in Iraq and Syria may raise them to the level of the Middle East's "big three", but at present they are far behind.

Below is a table of Middle Eastern countries which should be examined in connection with the map in the front endpapers.

MIDDLE EASTERN COUNTRIES

Country	*Area in sq. miles*	*Population end 1944*	*Dominant language*	*Dominant religion*
Turkey	299,000	19,100,000	Turkish	Islam
Egypt	386,000	18,100,000	Arabic	Islam
Iran	635,000	15,000,000 or more	Persian	Islam
Arabian peninsula countries	1,000,000	7,500,000 to 9,000,000	Arabic	Islam
Iraq	175,000	3,000,000 to 3,500,000	Arabic	Islam
Syria	66,000	2,900,000	Arabic	Islam
Palestine	10,400	1,800,000	Arabic, Hebrew	Islam, Judaism
Lebanon	3,900	1,100,000	Arabic	Christianity, Islam
Cyprus	3,600	400,000	Greek, Turkish	Christianity, Islam
Transjordan	34,700	350,000	Arabic	Islam
TOTAL	2,613,600	69,250,000 to 71,250,000		

The Middle East is often incorrectly conceived as an area dominantly Arabic in language and nationality, in which non-Arabic groups can rightly be regarded as intrusive population fragments. In fact, rather less than half of its people are Arabic in language or national sympathy. Turks, Persians, Cyprians and Jews—not to mention lesser groups—will not thank anyone for calling them Arabs!

The tie of the Islamic religion is more inclusive, but the unity created by this tie can also easily be overstated. The Sunnite orthodox doctrine of the Islamic world is fiercely rejected by the Shiites of Iran, Iraq and the Yemen. Both Turkish and Iranian nationalism, while accepting Islam as a religion, are violently opposed to all Pan-Islamic movements and reject Islam as the foundation of State and Society. The many smaller Jewish and Christian groups in the Middle East must also be counted out when the region is conceived as "united in Islam".

The greatest State of the Middle East, Turkey, has turned her back most firmly on her Islamic past. Islamic teaching is prohibited in Turkish schools. The religious orders have been closed and religious exercises forbidden outside the mosques. The Moslem

Holy Law has been replaced by codes adapted from Switzerland, Italy and pre-Nazi Germany. Arabic script has been replaced by Latin characters, and the Moslem calendar has given way to the Christian-Gregorian one. The fez (a brimless, truncated cone of red felt), imposed in the nineteenth century as the distinctive headdress of all Ottoman subjects, is still worn from Morocco to Syria, wherever minaret and mosque prevail—but it is banned in Turkey. Kemal Ataturk, the father of the Turkish Republic, explained: "Nations that persist in remaining at the intellectual stage of the Middle Ages are destined to disappear from the face of the earth . . . The fez sat on our heads as a sign of ignorance, of fanaticism, of hatred against progress and civilization. It was necessary to abolish it . . ."

It was easier to abolish the fez than to eradicate illiteracy, overcome poverty, and create a responsible tradition of democratic self-government. Three-quarters of the Turkish people are still illiterate. The number of schools in existence suffices barely to accommodate half the children between the ages of 7 and 12. There is no political democracy in Turkey—despite democracy of manners and a comparative equality of social conditions. The members of Turkey's National Assembly are elected from nominees approved by the President of the Republic. Turkey is, in fact, a party dictatorship.

Economic backwardness is only beginning to be overcome despite extensive State economic initiative. In 1935 fully 80 per cent of Turkey's gainfully employed were occupied in agriculture and stock-raising, only 8 per cent in industry, handicrafts, mining, and construction. In 1937-39 less than 3 per cent of Turkey's exports consisted of manufactures, while 65 per cent of her imports were manufactures. She was particularly dependent on Germany, which supplied 47 per cent of her imports and took 39 per cent of her exports. She could not manufacture her own heavy armament.

This economic backwardness largely explains the unheroic role that Turkey played in World War II. She accepted all the aid she could get from both sides while remaining neutral to the last moment. She received shipments of gold and armaments from the United Nations and sold chromium and grains to Germany.

A similarly unheroic role in World War II was played also by the second great State of the Middle East, Egypt. On June 13, 1940, shortly after Italy entered the war, the Egyptian Prime Minister announced that Egypt would fight ". . . if Italian troops entered Egyptian territory; if Egyptian towns are bombed by Italian aircraft; if Egyptian military objectives are bombed."

Parliament acclaimed these pronouncements demonstratively. But no one took them seriously. All these *ifs* were realized. Italian (and German) troops entered Egyptian territory. Bombs fell on Alexandria, Cairo, and Suez. Egyptian governments came and went. But Egypt did not fight. Her governments merely became more cautious. If Italy and Germany were going to be the victors, Egypt must be in a position to argue that she had shown them at least a benevolent neutrality. So Egypt did not declare war in 1940 or 1941 or 1942 or 1943 or 1944. She declared war in 1945! And then the declaration of war was opposed by the "popular" Wafd party.

All this should not lead to any silly charges, against the mass of the Egyptian people, of indifference to the cause of the United Nations or of democracy. Their political indifference is much more profound. The mass of the Egyptian people know nothing of world politics. The "political class" of the country hardly includes 5 per cent of the total population. Another 20 per cent may be said to be literate but it does not derive any substantial economic advantage from this fact. Egypt, unlike Turkey, is a country of great extremes of wealth and poverty. In 1940 less than one-half of 1 per cent of her landowners owned 37 per cent of the land. Eighty per cent of her people live, all of the time, under conditions of slow starvation. Many are infected with parasitic diseases which stunt the growth of the body, often keep the mind from developing beyond that of a child, and produce general apathy and anemia. The chief parasitic diseases, bilharzia and ancylostomiasis, affect at least three-quarters of the population. Their incidence is spreading with the extension of irrigation into Upper Egypt. Pellagra is very widespread. Trachoma and other serious eye diseases affect over nine-tenths of the population. A large part of the Egyptian masses today lives a life little removed from walking death.

Conditions are not radically different in the other Arab States. Modern industry has made only a feeble beginning. In no case is there a duplication of the extreme range from abject poverty to great wealth that exists in Egypt. However, with the exception of the Lebanon, no other Arab State contains a substantially broader "political class" than does Egypt. Monarchy is very strong. King Ibn Saud is an absolute monarch. King Farouk can break any Prime Minister and bring about the downfall of any party. The Emir Abdullah rules without any effective limits on his authority (except those of his British advisors). The King of Iraq, if he is a strong personality, can run the Iraqian Government as well as acting as Head of State. An independent Syria may also take the form of a monarchy, and if so it will be more than a Western "constitutional" monarchy. In all the Arab States which have ever had elections, those elections have always been won by the party in power at the time the election took place. Elections do not simply occur; they are "made".

Iran, the third of the great States of the Middle East, lies as completely outside the fold of Arab sympathies as does Turkey and only less completely outside the fold of Islam. But Iran's social, economic and political conditions are not greatly different from those of the Arab States. She has the same combination of mass poverty and illiteracy at the base, with authoritarian government at the top. The traditional Persian sect of Islam, the Shiah, is regarded as heretical by the great majority of the Islamic world. Modern Persian "heresy", however, goes farther; under Shah Riza Pahlevi, it broke the power of the religious orders in the State and turned its attention to the country's pre-Islamic tradition. The change of the name of the State from Persia to Iran was in keeping with this nationalist trend—involving the reversal of an "innovation" that had prevailed only since the sixth century before Christ.

Militant Iranianism did not, however, serve to shake the country's extreme economic backwardness. One-third of the 15 million (or more) people of the country are still primitive nomads. The country's greatest wealth that has not been alienated by foreign concessions consists of about 16 million sheep, 6 million goats, 1 million oxen, and 1 million cows. Under the aegis of the Anglo-Iranian Oil Company, Iran has become the fourth largest crude petroleum producer in the world; in 1943, her output was 10,900,000 metric tons, compared with 4,000,000 for Iraq.

Like the upper classes of other Middle Eastern countries, the governing circle of Iran was greatly impressed with National Socialism. After the pro-German coup in Iraq in April 1941 and the German invasion of Russia in June, Russia and Britain became profoundly concerned over pro-German activities in Iran. In September 1941, the pro-German Shah was forced to abdicate. Russia and Britain jointly occupied the country. In view of its backwardness, anything that can honestly be called democratic government is impossible in the near future, but an evacuation of foreign troops has been promised by the "Big Three".

It is difficult to exaggerate the cultural and economic gulf between the various social levels of a Middle Eastern country, such as Iran or Egypt. At one extreme there is a debased poverty, an illiteracy and a limited local horizon reflecting a manner of life little removed from that of the meanest serf of the Pharaohs. At the other extreme there is luxury, higher education in the universities of Europe, and—for the rich Egyptians—a cosmopolitan cycle of winters in Egypt and summers in the cooler climate of northern Europe. This internal social gulf is no greater, however, than the gulf between various Middle Eastern communities. From Tel Aviv (the pride of Palestine Jewry) to Riyad (King Ibn Saud's "home town") is no more than 1,000 miles as the crow flies, but—despite Ibn Saud's armored cars and Rolls Royce limousines—the two communities are at least three centuries apart in history.

It used to be popular to say that the Middle East was "in transition". But a transition, even if it need not involve a well-defined starting point, means at least a definable goal. In the 1920's it was possible to believe that such a goal was accepted by almost all Middle Eastern societies: popular education, political democracy, freedom from foreign rule, industrialization, and transformation of the traditional cultural heritage of Islam under the impact of Western rationalism and science. In the middle of the 1940's, only one of these objectives commands undivided support: freedom from foreign rule. For the rest, the Middle East is in confusion rather than in transition. It has given up its traditional standards and has found no common compelling allegiances in others.

CHAPTER 3

LAND OF ISRAEL

ANCIENT EXPERIENCES

At the northern extremity of the ancient zone of Semitic settlement, there lies a "fertile crescent" of lands that have always been the envy of the nomadic and mountain peoples who live respectively on its southern and northern borders. The whole western horn of this crescent was known as Syria to the Romans. The part of the western horn south of Mount Hermon has been known as Palestine.

Palestine is one of the oldest homes of man. Cave deposits of human origin, perhaps 150,000 years old, have been found in several parts of the country. Both the Old and New Stone Ages are represented. About 3000 B.C. the country was already inhabited by a Semitic-speaking people identified as Canaanite down to the thirteenth century B.C., as Phoenician thereafter, and as Carthaginian in their most famous west Mediterranean colony. In the eighteenth century B.C. the Canaanites (under the leadership of the little-known Hyksos) participated in the conquest of Egypt. They were not expelled until about 1560 B.C.

The ancient Hebrews preserved a tradition according to which their forefather Abraham was "a fugitive Aramaean" from Harran, a northwestern Mesopotamian city that flourished in the nineteenth and eighteenth centuries B.C. Some of his descendants settled in the land of Canaan and adopted a Canaanite dialect. Another strong tradition holds that part of the Hebrew people sojourned in Egypt. They may have entered the country with its Hyksos conquerors. The king who knew not Joseph was, in all probability, a native Pharaoh of the New Empire that followed the expulsion of the Hyksos. Moses and some of the Aaronids bear distinctively Egyptian names. Modern historical scholarship suggests that the Hebrew Exodus from Egypt took place between 1290 and 1260 B.C. In 1231 B.C. (or shortly thereafter) the Iraelites took Lachish. In 1229 B.C. they were already in western Palestine in force. Moderately accurate records of many striking incidents in the conquest survived because already in the thirteenth century the Hebrew alphabet was written with ink for everyday purposes.

In the course of the thirteenth and twelfth centuries B.C. the Canaanite power in Palestine was broken. Along with the pressure from the Israelities in the interior, came the invasion of the Philistines, who seized most of the coast, and the Aramaeans, who seized the Syrian interior. The Canaanites lost nine-tenths of their territory.

Though by 1100 B.C., at the latest, the Israelites had occupied all the hill country from east of Tyre to the extreme south, they did not come into the Canaanite inheritance on the Mediterranean coast. Around 1225 B.C. the Peoples of the Sea (Plishtim, Philistines), refugees from Mycenaean upheavals, swept over the eastern Mediterranean. They were defeated by Rameses III in 1188-1187 B.C., in a great naval and land battle on the Egyptian coast. Dislodged from Egypt, they settled in Palestine from Gaza to Jaffa. In military technique, they were more than a match for the Israelites, particularly when the latter were disunited and warring among themselves.

This was a period when the more distant threats to Palestinian peace were suspended. New States could be formed free from the threat of extinction by Egyptian or Mesopotamian power. After 1150 Egypt ceased even to pretend to rule Asia Minor, and after Tiglath-Pileser I (1130-1074 B.C.) Assyria recoiled to the Euphrates.

HEBREW SOCIETY

The Hebrew people in Palestine constituted a cultic and military union. The "father's house", the native town, and the tribe were its most compelling allegiances, but it had a loose, wider unity based on religion, and it might be firmly united—for defense or conquest—by the emergence of leadership in moments of national crisis. The widest boundaries of this unity were those of religion. Religion, however, is a particularly narrow base for political organization when it is conceived as something into which one is born and which does not recruit new adherents by conversion. Before 1000 B.C. the proselytizing strength of the Mosaic religion was spent. The Hebrews rejected the orgiastic religion of Canaan, the dead-worship of Egypt, and the astrology of Babylon, but they did not convert other peoples to their own faith and so create a wider base for a political community. The peoples of Syria did not become Hebrews. Therefore the national base of the Hebrew political structure was narrow. In the eclipse of Egyptian and Mesopotamian power, between the twelfth and ninth centuries, small and weak States could enjoy a brief independence in Syria. With the reorganization of Assyria, they were doomed. Hebrew political genius and religious zeal did not suffice to create a large, strong State in Syria during these three centuries. The opportunity has never recurred.

Moreover, the Hebrews in Palestine failed also to establish a social order that commanded comparatively undivided national allegiance. It is their glory that they would not accept social peace on the basis of slavery, as in Egypt and Mesopotamia. The independent Hebrew peasant remembered Egypt as a house of bondage; he would have none of it. His national organization contained no caste distinctions; therefore the ground was left free for equalitarian demands. In the fullness of time, the Hebrew God could become a God of social justice, whose righteousness was offended by the oppression that the great and fat of the cities visited upon the poor peasant and herdsman. Meanwhile, however, social conflict rent and tore Hebrew unity.

A class of wealthy people, living in towns, is distinguishable in our earliest records of Hebrew settled life in Palestine. They were the better families, elders of walled towns, military leaders owning land worked by indebted tenants or debt slaves. They engaged in the caravan trade and used its profits to buy land. The rich could equip themselves with spear, armor, and war chariot; the peasant could not afford this. The rich therefore became dominant among the warriors, the "bnai chail". With dominance in war came dominance in government, religion, public offices, and judgeships. Under the landed gentry were peasants, foreign craftsmen ("gerim"), and slaves. Above them—but not out of reach—the kings.

Debt slavery is old in Israel, as amongst most peoples. Old also, and less common among other peoples, are customary and legal efforts to protect the poor from slavery. The worker must be paid each day; he must not be held by his employer if he wishes to go. Widows, orphans and the poor have rights over land and over the crops in the field. Partially effective legislation provided that debt slavery should not last beyond seven years, and popular aspiration asked also for debt cancellation and reversion of land purchases after seven years. The cry for the remission of debts and the redivision of the land rings throughout history.

Under David and Solomon, Israelite rule reached its maximum territorial extension and its highest point of national unification. King David (1000-960 B.C.) is the greatest political figure in Hebrew history. He effected national unity and established the Hebrew Kingdom as a great power. On the north, his boundary may have reached to Kadesh on the Orontes; he garrisoned Damascus and was allied with Tyre. To the south, he established his authority over the peoples who lived on the margins of the north Arabian desert. The Philistines of the Mediterranean coast and the Transjordanian Edomites, Moabites and Ammonites were equally his tributaries. As it has been the traditional Jewish ambition to re-establish the House of David in Jerusalem, so Jews have traditionally thought of Palestine's boundaries as coinciding vaguely with those of King David's domain.

Salo Baron has estimated that, about the time of King David, the Hebrew population of Palestine lived in an area of about 7,000 to 8,000 square miles, containing about 300 to 400 towns. He also estimates that the total Hebrew population at this time was between 1,300,000 and 1,800,000. The tributary peoples—living in an area perhaps three times as large as that occupied by the Hebrews—numbered about 3,000,000.

After King David, the political and economic history of the ancient Hebrews in Palestine, records an episode of oriental splendor under Solomon (960-925 B.C.), then division, impoverishment, war and exile. The Hebrew kingdom of the north was subjugated by Assyria (732-721 B.C.). The kingdom of the south, first restricted to the Judean highlands, was struck a great blow by Nebuchadrezzar of Babylon in the first great Judean deportations (597 B.C.). Thousands of the leading figures of the Judean community and its best craftsmen were taken away into exile. A revolt against Babylon in 586 B.C. led to the destruction of Jerusalem and further deportations.

Jews were left living only in a narrow circle of a few miles around the destroyed city. Edomites gradually occupied the south hill country. New peoples had long been established in the north. The coastal cities were coming under Greek cultural influence. The Jewish "best families" had been deported to Babylon. Naturally they adopted a superior attitude towards the peasants who had been left in Palestine. Jews were already established in the Phoenician colonies, Egypt and Babylon. They soon spread all over the Mediterranean world. In some cases, they rose to wealth and high political position. Always they preserved the tradition of their unique link with the land of Palestine. But from the sixth century B.C. Palestine has never been the exclusive center of Jewish life, and only for limited periods has it been the primary center. If we reckon from about 1230 B.C. to 586 B.C., ancient Hebrew rule in Palestine persisted for about six and a half centuries.

GRECO-ROMAN DOMINATION

The Babylonian captivity did not mean the permanent end of large Hebrew communities in Palestine. Hebrews returned to the country in sufficient numbers to constitute a majority of its population again for about four centuries (200 B.C. to 200 A.D.). This return was a measure of the profound attachment of many Hebrews to the land of Palestine, their abiding conviction that life did not have its full value elsewhere. "By the rivers of Babylon, there we sat down, yea, we wept, when we remembered Zion. . . . How shall we sing the Lord's song in a strange land? . . . If I forget thee, O Jerusalem, let my right hand forget her cunning."

After 444 B.C. a revival took place in Judea which had great significance for the "codification" of Jewish religion, though it was of very limited immediate political and economic importance. From this time on, it is proper to speak of the known descendants of the ancient Hebrews as Jews. Under Persian sponsorship, the priestly code of the temple of Jerusalem was made standard for Jews throughout the Persian Empire.

Greek culture began to establish itself in the Palestinian coastal plain as early as the sixth century B.C. With the conquest of Tyre by Alexander in 332 B.C., Hellenization became public policy. Alexander and his Ptolemaic and Seleucid captains were tolerant of national and religious customs, but they saw the firmest support for their rule in the Hellenistic communities which they planted throughout their empires. Great Hellenistic cities were accordingly created in Palestine. The old Philistine towns became Greek, and new Greek cities were established in Transjordan.

So long as Hellenism (and its Roman successor) did not strike at Jewish religious feeling, it encountered little resistance in Palestine. Its military strength, its organizing ability, its economy and its culture swept the field. However, when Jewish religious susceptibilities were aroused, they fanned a violent national resistance. Under the Maccabees (Hashmoneans), the Jews waged successful guerrilla warfare against the Greeks. Then, by a series of combinations with various Seleucid captains, they established an independent theocratic State. About 100 B.C. this Jewish State, under Alexander Jannaeus, held all the present territory of Palestine and also the cities of Transjordan. But Jannaeus was hated by the Jewish masses as a cruel, irreligious tyrant, defaming his positions of High Priest and King. They rebelled against him and fought six years of civil war. Amid such disunity, Roman rule was imposed easily. Pompey took Jerusalem in 63 B.C.

The question of the magnitude of Palestine's population at the beginning of the Christian era has been much discussed but without universal agreement. Julius Beloch estimated that Palestine, on both sides of the Jordan, had about 2,000,000 people. Qualified contemporary archeological opinion (that of Nelson Glueck) suggests a similar figure but perhaps as much as 2,500,000, with half in Transjordan. Salo Baron accepts a figure of about 2,500,000 but thinks that the total may have been as high as 3,000,000. Less qualified judges have advanced much larger figures. If we accept a total figure of about 2,500,000, about 2,000,000 may have been Jews. The Jews of Palestine, however, at that time constituted only one-third or perhaps even as little as one-fourth of total world Jewry. Of the total population of the Roman Empire, 7 to 10 percent were Jews. Syria, Egypt, Babylonia, and Asia Minor each may have had about one million Jews, and there were smaller numbers of Jews in other areas.

Palestine could not afford a livelihood for all Jews. Baron expresses the judgment that, of the large Palestinian population, "The masses lived in dismal poverty." A five-fold grain harvest was considered normal in Palestine. Talmudic authorities prohibited the export of grain from Palestine even to neighboring Syria, so that local needs might be met. Similarly the Talmud prohibited the export of wine and olive oil from Palestine. Wood was so scarce that Talmudic law made special efforts to preserve it. The price of wheat in Palestine is judged by Hechelheim to have been much higher than in Egypt. Clothes were more expensive than in Mesopotamia, and in general Palestine's "cost of living" was regarded as higher than that of neighboring countries.

Palestine had an advanced agriculture. A common form of land use included two crops a year. Growers of grapes used fertilizers, wine presses and water machines. Water conservation was more advanced than ever before or since. Rivulets and rivers were diverted by canals and trenches; wells, tunnels, and aqueducts were dug. The coastal plain, the Jordan valley, and areas around Lake Tiberias were extensively irrigated. In Transjordan and the Negeb, cisterns and large reservoirs played an unprecedented role in water conservation. In both of these areas, irrigation pushed the margin of cultivation farther than ever before or since.

Yet agriculture was not considered a profitable occupation. The Talmud relates that Rabbi Eleazar (second century A.D.) once saw a plot of land that was ploughed across its width. "Wert thou to be ploughed along thy length also," he remarked, "engaging in business would still be more profitable." Grain culture was regarded as particularly unprofitable. Cultivation of grapes, fruits, nuts and vegetables, and the raising of sheep and goats were held to be more remunerative occupations. Yet the Talmud prohibits the pasturing of sheep in settled areas except in uncultivated woodlands; it was feared that sheep runs would otherwise displace crops, to the disadvantage of the poor.

Even at the height of its prosperity, at the beginning of the Christian era, Palestine was an overwhelmingly agricultural country. The Talmud defines a rich man as one who owns 100 corn fields, 100 vineyards, and 100 slaves. Jews, in particular, were distinguished as a non-commercial, non-industrial people, in contrast with the seafaring, trading, and banking Greeks.

In the absence of organized statistics, we are reduced to impressionism with respect to the importance of Palestine's manufactures and her international trade. It is our impression that her manufactured exports were neither great in volume nor much sought after. Her imports also seem to have been small, except in years of very bad harvests, because most of her imports consisted of luxuries. On the other hand, Palestine's transit trade was apparently quite important—perhaps more important *comparatively* than it will ever be again. This importance of transit trade grew out of the limitations of ancient transportation, as well as the comparatively advanced state of Palestine's neighbors. The Palestine coastal plain, the desert route through Akaba or Petra, or the Transjordanian plateau highway route could hardly be avoided in trade between Egypt and North Africa on the west, and Syria, Mesopotamia (Iraq), Iran, and still more distant countries to the east. The populations of Syria, Iraq, and Transjordan were then several times as great as they are today, and Egypt occupied a relative importance in the Mediterranean economy which she is unlikely ever to regain.

Palestine was more prosperous at the beginning of the Christian era than ever again until the present generation. Yet, as readers of the New Testament are aware, the country seethed with national and social revolt. Rome protected the rich, and thereby brought upon them the stigma of association with alien, pagan force. When the revolt against Roman rule flamed, the rich were massacred. It is significant that one of the first actions of the revolutionaries, when they were clearly committed to the expulsion of the Romans, was to burn the record office where the mortgage-deeds were filed. The anti-Roman party included the humbler priests, who utilized the revolution to break the monopoly of the aristocratic families of Jerusalem with respect to the office of the High Priest.

The first great Jewish revolt against Roman rule was subdued only after four years of bitter warfare (66-70 A.D.). Tacitus estimates total Jewish fatalities in this revolt at 600,000; many more Jews were sold into slavery. Yet sixty years later the Jewish population had recovered sufficiently to make another prolonged effort for national independence. Bar-Kochba led a revolt which lasted for over three years. Dio Cassius estimates that over 500,000 Jews fell in this conflict; the slave markets were again filled. By 135 A.D., when resistance had been crushed, Judea was almost a wilderness. Jerusalem was rebuilt by Hadrian as Aelia Capitolina. No Jew was permitted to live there.

After 231 A.D. Jews were again allowed to enter Jerusalem. There were Jewish Patriarchs in Palestine till 425 A.D. When the Persians entered Palestine in 611 A.D., they were assisted by the Jews. After the second century A.D., however, Babylon clearly took precedence over Palestine as a center of Jewish life. Jews continued to live in Palestine, but they never again succeeded in making themselves the dominant element of the population. The bulk of Jewish population had been dispersed to the ends of the Empire and beyond—to Arabia, Babylon, the shores of the Black Sea, Egypt, Italy, and more distant countries.

Yet, to pious Jews, Jerusalem has always been the center of hope and prayer. It seemed to them, now that the city was no longer a Jewish national capital, that God Himself had deserted it. Daily they repeated: "And to Jerusalem, Thy city, return in mercy, and dwell therein . . . rebuild it soon, in our days. . . . Accept, O Lord our God, Thy people Israel and their prayer . . . and let our eyes behold Thy return in mercy to Zion."

CONTINUITY OF ATTACHMENT

The continuous life of Jewish communities in Palestine seems never to have been entirely broken, though at some times the Jewish communities were extremely small. For long centuries, however, the attachment to Palestine of Jews living outside the country was of greater significance than the accomplishment of the few Jews who lived there.

The character of this attachment is difficult to ascertain. A Messianic religious connection has always existed wherever—as among all traditionally pious Jews—Messianic religious beliefs are held. But this is very remote from a current, operating intention to go to live in Palestine. Until the rise of modern Zionism, such a current, operating intention can have been held only by a very small minority of Jews. Even in modern times, most of the world's Jews do not wish to go to live in Palestine. More of them wish to live in the United States.

Nevertheless, throughout the centuries, Jews drawn by religious or national attachment (or driven from other countries) have attempted to re-establish themselves in their ancestral land. Failing opportunities to establish a permanent self-sustaining life, they have at least gone to pay a visit to the Holy Land of Israel or to live out their declining years in the country. The great Hebrew poet, Yehuda HaLevi, left Spain in 1135 A.D. to visit Palestine; nothing is known of what became of him there. Moses Maimonides, famous Jewish philosopher and physician, visited the country in 1165 A.D.; his autobiographical account of the journey reflects a religious and national allegiance to Palestine but no idea of large-scale Jewish settlement. Maimonides himself returned to live in Cairo. From the fifteenth century on, accounts of pilgrims, travellers, and settlers are frequent.

There is an ancient Hebrew saying: "To dwell in the deserts of the Land of Israel is more desirable than to live in the palaces of the *Galut* (exile)". Yet the early pilgrims and settlers were shocked to see how nearly a desert Palestine had become. A Venetian Jew who went to Palestine in 1496 records his first impressions of Jerusalem: "When I saw from a distance the city, desolate and waste, and the Mount of Zion all desolate, how it was become a lair for jackals and a cave for lion's whelps, foxes walking therein, my soul was spilled within me and my heart was sad. . . . May the Lord in His mercy turn again the captivity of Jacob, speedily in our days. . . ."

A particularly large number of Jews came to Palestine in the century following their expulsion from Spain (in 1492). The Jews did not, however, make a successful economic adjustment to Palestinian conditions. In the seventeenth and eighteenth centuries, a majority of Palestinian Jews apparently lived largely from accumulated savings or foreign charity. They were constantly sending messengers abroad to collect money from Jews in more prosperous countries. It was a common view that only a rich Jew should go to Palestine—for he would find no occupation there but to study the Torah.

These pilgrims, travellers, and settlers—religious and nationalist, for traditionally these two elements are not readily separable in Judaism—served to freshen the memory of ancient Hebrew society in its own land. Jews have always known, in modern times, that Palestine was in fact inhabited primarily by non-Jewish people. But it was easy to regard these non-Jews as latecomers who had temporarily established themselves in a land pre-empted by earlier claimants. These strangers in the land must be treated considerately, according to the laws of justice and humanity, but the land in which they were living was the Land of Israel.

This view of the unique relationship between the Jewish people and the land of Palestine is by no means the exclusive property of Jews. On March 2, 1841 a Memorial petition was addressed to Lord Palmerston by 320 Protestants and Catholics. They wrote:

> Your Memorialists beg leave further to remind Your Lordship that the Land of Palestine was bestowed by the Sovereign of the Universe upon the descendants of Abraham as a permanent and inalienable possession nearly 4000 Years ago, and that neither conquests nor treaties among men can possibly effect their Title to it. He has also decreed that they shall again return to their Country and that the Gentiles shall be employed as the means of their restoration.

CHAPTER 4

SYRIA OF THE ARABS

ARABIC SOCIETY AND PALESTINE

Palestine does not hold the same unique position in general Arabic consciousness as it does in religious Judaism or nationalist Zionism. For the general Arabic world, Palestine is one corner of the great province of Syria, of which the center lies at Damascus rather than Jerusalem. This historic Syrian province runs from Alexandretta to Sinai. It includes both the narrow coastal areas now within the political boundaries of the Lebanon and Palestine and the broader territories now within the boundaries of Syria and Transjordan. The historic Syria, in turn, is only one of the provinces of the Arab world, of lesser religious significance than the Hejaz and no more uniquely expressive of Arab political aspirations than are Iraq, Egypt, or the States of the Arabian peninsula.

Yet, to the Arabs of Palestine, the country is as uniquely their homeland as to any Zionist Jew. For nine centuries, from the expulsion of the Byzantines to the coming of the Turks, Palestine was—at least in part—under Arab rule. For perhaps ten centuries (from about three centuries after the first Arab conquest) the majority of its people have spoken the Arabic language. They have made their lives in Palestine and buried their dead in its soil. They are not rootless people, to be lightly shipped off to any other country. With the awakening of nationalist consciousness, they have come to feel themselves Arabs—but Palestine Arabs.

ISLAMIC ORIGINS AND PALESTINE

Islam is not primarily a development from Arab paganism. Its principal roots are Jewish and Christian, and like these older religions it has many profound associations with the soil of Palestine. "Mohammedanism," said G. F. Moore, "owes its existence to the impression Jewish and, in smaller degree, Christian ideas made upon the mind of the Arabian prophet." Three-fifths of the people of Palestine are today followers of that prophet.

Jewish communities existed in the Yemen at least as early as the second century of the Christian era. They made converts even among the royal family of the Himyarites. In Northern Arabia, Medina was (as C. C. Torrey has shown) a very old settlement of Jews from Palestine. Mohammed and the first two Caliphs, Abu-Bakr and Omar, frequented synagogue schools in Medina. "The volume and nature of Jewish lore appropriated by Mohammed would indicate that his association with Jews had continued for a long period of time and had been of the closest thinkable kind." (Julius Obermann).

Not only are many basic Islamic concepts also Jewish and Christian, but also—only less than in the older religions—Jerusalem holds a central place in the revelation of those conceptions. According to the Moslem faith, some time before 622, Mohammed made a journey by night to the seventh heaven. He was first instantly transported from Mecca to Jerusalem. Then, near the Wailing Wall of the Jews, he mounted a winged horse with a woman's face and a peacock's tail, and so ascended to heaven. The starting point of this journey in Jerusalem is Moslem holy ground. On its site there took place the clash between Moslems and Jews in August 1929.

Islam is conceived—like Judaism and Christianity—as a heavenly revelation embodied in a Holy Book. The Jews and Christians were, to Mohammed, the peoples of the Books. He came to add his book to theirs—Torah, Evangel, and Koran. "We believe in Allah and what has been sent down to us, and what has been sent down to Abraham and Ishmael and Isaac and Jacob and the Patriarchs, and what has been given to Moses and Jesus, and what has been given to the Prophets from their Lord; we make no distinction between any of them. . . ."

Mohammed's ideas were much nearer to Judaism than to Christianity. He particularly rejected all trinitarian elements of Christianity, as violations of monotheism. God is "al-Rahman" (the merciful), Hell is "jehinnam" (the fire), Paradise is "the Garden" —all Hebrew words. At Medina, Mohammed expected to be recognized as a prophet by the Jews. His followers prayed with their faces toward Jerusalem; they observed Jewish dietary laws; they fasted on the Jewish Day of Atonement.

When the majority of the Jews failed to acknowledge him as a prophet, Mohammed had a new revelation. Allah required that not toward Jerusalem but toward the old Arab pagan holy city of Mecca men should turn in prayer. The Jewish dietary laws were abrogated; fasting was ordained for the whole month of Ramadan; Friday became the Sabbath of Moslems. The pagan shrine of the Kaaba at Mecca was recognized as an ancient, though now degraded, home of the worship of the true God. In 630, when the Moslems took Mecca, Mohammed destroyed the idols of the Kaaba, but he incorporated the shrine itself into his new religion. Moreover he accepted the whole idea of pilgrimage to this shrine as central to the Moslem faith. He even accommodated himself to the fetishism of kissing the black stone of the Kaaba. These were his great compromises with Arab paganism. With the old Meccan Kaaba as its center, Islam easily became an Arab national religion.

THE CALIPHATE AND PALESTINE

Mohammed united about one-third of the Arabian peninsula under the Islamic banner and in tribute-paying to Medina. His successor, Caliph Abu-Bakr, completed (632-4 A.D.) the unification of the peninsula. The Arabs of the north, deprived of their millennial tribal warfare, turned their raids against Byzantine and Persian territories.

The ceaseless wars between Byzantium and Persia had exhausted their resources and strengthened the hands of the bedouin. Byzantium had long paid subsidies to the border tribes, to induce them to keep the peace. Yet they had exploited the disturbed war years to raid the sown and levy tribute. Encouraged by his successful campaign against Persia, culminating in the restoration of the True Cross to Jerusalem (629 A.D.), Heraclius suspended the subsidies to the desert tribes south of the Dead Sea. They appealed to their kindred further south. "It was not the sagacity of the Caliphs, wanting to conquer the world, that flung the Moslem host on Syria, but the Christian Arabs of the border districts who applied to the powerful organization of Medina for assistance." (C. H. Becker).

In 629 a major Arab raid was defeated easily by the Byzantines. But in 634 there began a larger series of raids, which stumbled into an Empire. In February 634, a raid from the south penetrated as far as Gaza. On July 30, 634. a Byzantine army was defeated between Gaza and Jerusalem. Early in 635, the Arabs took Beisan, and in September of the same year they occupied Damascus. The Byzantine forces, rallying at last to meet the scorned foe, were decisively defeated in August 636 on the Yarmuk. Syria became an Arab province.

The Arabs were, on the whole, welcomed by the settled populations of Syria, as well as by their northern desert kindred. The Arabs' tribute was lighter than the previous taxes. The Arabs at first granted complete religious freedom. "It was not the religion of Islam which was . . . disseminated by the sword, but merely the political sovereignty of the Arabs. The acceptance of Islam by others than Arabians was not only not striven for, but was in fact regarded with disfavor. The subdued peoples might peace-fully retain their old religions, provided only they paid ample tribute. As on conversion to Islam these payments ceased, at least in the early times such changes of religion were disliked." (C. H. Becker). Syria remained predominantly Christian until the third century of Moslem rule. Few Jews were converted to Islam. The Arabian admixture to the previous population was also small. Only the highest government positions were filled by Arabs; the remainder continued in the old hands.

After the unsystematic annexation of Syria, further Arab conquests proceeded in a more planned way. Those conquests achieved great successes more rapidly than ever in the history of any other ancient or modern empire. At the death of Mohammed, he ruled barely a third of Arabia. A century later his successors, the Umayyad Caliphs, ruled an empire stretching from the Bay of Biscay and the Pyrenees in the west to the Indus and the Turkestan frontier of China in the east. On the north its frontier was the Aral Sea and on the south the upper cataracts of the Nile.

These conquests were wider than they were deep. They laid the ground for the diffusion of Islam and the Arabic language, but they created little common social consciousness among the conquered peoples. The conquests were held together by force and gifted military leadership. When that military leadership disappeared, there was no common "will for the State" to hold the hastily-conquered Arab empire together. No tradition of public responsibility and public service was developed among the medley of conquered people. The Empire consequently easily broke up, and there was no profound political force resisting its endless fractionalizing, until the whole fabric of the caliphate was pulverized by family and personal strife. Unification came again only from the outside, the military force of the Ottoman Turks, nomads from central Asia, repeating in the sixteenth century what the nomads of the Arab desert had accomplished in the seventh century.

In 691 the great Caliph Abd-al-Malik, in an attempt to make Jerusalem a greater center of Moslem pilgrimage than Medina, began building a shrine and a sanctuary on the general site of the Temple of Solomon. The Shrine is the Dome of the Rock, and the sanctuary is known as the Aqsa Mosque. Together they constitute the Haram al-Sharif and are today regarded by Moslems as only less sacred than the two Harams of Mecca and Medina. In Palestine, also, the Caliph Sulayman (715-17) built the city of Ramleh, which he made his residence.

The great days of the Caliphate, in Palestine as throughout the Middle East, were those of the early Abbasids

(775-847). In the reign of Harun-al-Rashid (786-809), the Caliph was the most powerful figure in the world, dwarfing his contemporary Charlemagne. The Abbasid empire was also far ahead of Europe in all the works of civilization.

The period of brilliance was brief. By 861 A.D., the power of the Caliphate had been shattered by its own military chieftains. Caliphs were made and unmade by military bands, mostly Turkish, led predominantly by slave generals. The empire began to fall to pieces. Strong central government—adequate to maintain order and defend the country against bedouin incursions—disappeared in Syria-Palestine. The short-lived Tulunid dynasty of Egypt occupied Palestine and Syria in 877. From 905, Syria reverted to the Abbasids. Then all or part of the country was ruled successively by the Ikhshidids of Egypt, the Hamdanids of north Syria, the Byzantine emperors, and the Fatimids of Egypt. Fatimid rule began about 969 and lasted, in a more or less attenuated form, until the Fatimid Caliphate was extinguished in 1171 by its great Vizir, Saladin (Salah-al-Din). Especially after 1043, Fatimid control over Syria and Palestine was nominal. The country was ruled by a multitude of petty sheikdoms. Saljuq Turkish bands appeared in Syria before 1070 and, for a short time, held most of Palestine. But even under the Saljuqs there was no central government. Many members of the Saljuq family ruled independently in the principal cities, and the rest of the country was held by local Arab chieftains.

"Unfortunately Arab historians had their interest too much centered in the caliph's affairs and political happenings to leave us an adequate picture of the social and economic life of the common people of those days." (P. K. Hitti). Unfortunately also, little systematic archeological work has been done for this period so that, unlike earlier eras, archeology does not supplement importantly what is known from literary sources. Guy LeStrange records 24 Arabic historians and geographers who described the land of Palestine between the middle of the ninth century and the beginning of the sixteenth, but it is a meager harvest that the modern economist gleans from their pages. One must guard against their superlatives. Their standards of "great" and "rich" are not ours. For instance Nasir-i-Khusran writes (1047 A.D.), "Jerusalem is a very great city, and at the time of my visit it contained a population of some twenty thousand men."

There is evidence of a shrinkage in the sown agricultural area as compared to Roman and Byzantine times. East of the Jordan much cultivated land reverted to sheep and camel pasture. Even west of the Jordan, sheep, goats and camels occupied a relatively larger place in the agricultural economy than they had formerly. But we must not imagine a complete disappearance of irrigation and intensive cultivation; there is evidence even of public expenditure on irrigation canals. Istakhri writes (951) of Palestine as "the most fertile of the Syrian provinces." Mukaddasi speaks of its production of white bread, olive oil, figs, grapes, sugar-cane, oranges, bananas, almonds and asparagus. Among agricultural products and raw materials, he reports Palestine exports of olives, dried figs, raisins, honey, white building stone, marble, sulphur and salt. Transjordan is recorded as exporting grain, lambs, and honey. Items of handicraft production mentioned in our sources include soap, kerchiefs, veils, rough cloth, cloth of mixed silk and cotton, paper (made of cotton), leather work, and religious objects.

Apart from disorganized tribute and plunder, there was little discriminatory taxation under Moslem rule. Christians and Jews were subject to a special poll tax, but it was payable only by men over 15 years of age, in good health, and not unemployed; it was not a heavy tax. The land tax was generally one-fifth of the crop value. There were also tolls and dues of various kinds. However, when these taxes were not supplemented by irregular extortion, they were apparently not unbearably severe. Records survive of total taxes collected in Syria-Palestine for various years from the end of the eighth century to the end of the tenth. The total of these taxes varies from a low of 670,000 dinars to a high of 2,600,000 dinars. Guy LeStrange evaluated the gold content of these extremes at £335,000 and £1,300,000 respectively, in terms of the gold content of the pre-1914 pound sterling. At the beginning of the ninth century, these revenues were less than 4½ percent of the total revenue of the Abbasid Empire. As the empire disintegrated, the contribution of Syria-Palestine became relatively more important. In absolute terms, however, the Syria-Palestine revenues show no decided trend over the two centuries for which we have reports.

THE CRUSADES

The two centuries of the crusades (1094-1291) were a period of great political, economic and cultural retrogression in Palestine. From the contact of Europe and Asia, Europe alone was the gainer.

These centuries were not characterized by a great organized array of the military power and moral authority of Christianity against that of Islam. They were characterized rather by an extremely fractionalized and exhausting struggle of petty rulers for temporal power. The only relatively constant trends in Palestine were towards the elimination of stable, central government authority and the dissipation of economic resources. The wars of the crusaders contributed far more to making Palestine a "backward" country than had the conquest of the country by bedouin Arabs from the south five centuries earlier.

In the first sweep of crusader successes, the Latin Kingdom of Jerusalem was founded and extended under Baldwin I (1100-18) and Baldwin II (1118-31) from Akaba to Beirut and from the Mediterranean to the Jordan. The whole of the interior was, however, won back from the crusaders (largely by Saladin) by 1189. With the disintegration of Moslem rule in the early thirteenth century, the Christian forces again won cheap victories. However, from 1263 to 1291, the Mamluks—who had first beaten back a greater foe, the Mongols—expelled all the crusaders from both Palestine and Syria.

The thirteenth century accounts agree that, by the time the last crusader stronghold had been conquered, much of Palestine had reverted to the desert. There was a great deal of indiscriminate slaughter on all sides. The petty military states levied extremely oppressive taxes and irregular exactions. Amid such general insecurity, there was no incentive to improve the land or to accumulate wealth through patient saving. The peasant became a semi-nomad, interested only in the immediate crop, and ready to flee from any marauding band. Irrigation and soil conservation collapsed. In 1267 Nachmanides describes Jerusalem as a village of 2,000 people.

ARABIC DISINTEGRATION

The end of the Crusades did not bring a period of peaceful reconstruction in Palestine. From 1260 to 1401 Palestine was repeatedly under the pressure of far greater and more devastating warriors, the Mongols. Under the great leader, Jenghiz Khan (1155-1227) they laid the foundations of the largest empire the world has ever seen. They set a standard of massacre and devastation that even the crusaders could not match. By the first half of the thirteenth century, they had shaken every society from China to the Adriatic. Russia was in part overrun, and central Europe was penetrated as far as East Prussia.

In 1258, under Hulagu, a grandson of Jenghiz Khan, the Mongols sacked Baghdad. But when Hulagu had to return to Persia, the army he left behind was defeated near Nazareth by the Mamluks (1260). Hulagu's son, Abaqa, was also defeated by the Mamluks in Syria (1280). Twenty years later (1299-1300) the Mongols again penetrated south of Damascus, but were again beaten back. Again 100 years later, under the great Timur Lang (Tamerlane) the Mongols swept over Syria, marking their way with mounds of the skulls of conquered peoples.

In the intervals between these great invasions, Palestine suffered from the misrule of the Egyptian Mamluk slave dynasty. For about two and three-quarter centuries (1250-1517), the Mamluks maintained their rule, in lands characterized by general insecurity of life and property, occasional plague and famine, and frequent revolts. Christians and Jews were particularly subject to oppression and irregular exaction. In the absence of a regular effective system of taxation, however, all subjects were liable to capricious extortion. Marauding bedouins penetrated all the way to the Mediterranean. The fellaheen lived in the utmost insecurity. P. K. Hitti cites estimates that, in the course of the Mamluk period, the population of Syria, Palestine and Egypt was reduced by two-thirds.

In 1487-1488 Rabbi Obadiah of Bentinoro visited Palestine and described a ruined, backward country. In the golden reign of the Abbasids, a traveler coming from Italy would have found Palestine a more cultivated country than his own, but in the fifteenth century the roles were reversed. (Indeed from the thirteenth century on, the Arabic world has always been a "backward" area, culturally and economically, compared with Europe.) Rabbi Obadiah contended that Palestine's land was still good, but he admitted sorrowfully that no profit was to be gained from cultivating it. He found many villages destroyed in the wars of local princelings. Trees were cut down as a form of revenge. Famine and plague were common events. Beggars went from door to door asking for food. The fellaheen hid in the hills, to find security both from bedouins and tax collectors.

CHAPTER 5

TURKISH RULE IN PALESTINE

DISORDER AND BACKWARDNESS

At the beginning of the sixteenth century, Palestine suffered two great blows that brought a further deterioration in her already backward economic and political condition. These two blows were the loss of her position across the trade routes to India and her conquest by the Ottoman Turks (1516-1517). Already for centuries the central, western and European shores of the Mediterranean had led the eastern, African and Asiatic shores in all the works of civilization. Now, however, the centers of progress were shifting further west and north—over the Alps, up the Rhine, and along the Atlantic. The inland sea lost its old dominance, and Palestine was left in a stagnant corner of that sea basin. The trade routes to India were increasingly passing around South Africa rather than through the Middle East.

The German botanist Leonhard Rawolf, who visited Palestine in 1575, described it as a ruined and disordered country. He could go nowhere without submitting to robbery and extortion. George Sandys reported, about 1610, that Palestine was a bedraggled land of contemptible villages. Maundrell, an English chaplain at Aleppo, in 1697 drew a similar, depressing picture. He found Acre a village with a few poor cottages—and spacious ruins; Nazareth was "an inconsiderable village".

The Valley of Jezreel was almost completely deserted as agricultural land. From time to time bedouin tribes would camp there and levy tribute on all rural and urban settlers. Villages might pay tribute regularly to one sheikh, but that would not save them from levies by others. In the Jordan Valley and in Transjordan, the bedouins had their way completely: all settled agriculture was eliminated. Indeed, so far as Transjordan is concerned, there is almost no evidence of settled agricultural communities during the whole six centuries from 1200 to 1800.

From the eighteenth century, however, there is evidence of some economic progress. Pecocke, in 1737, found both agriculture and handicrafts much improved over earlier accounts. French influence was strong and had proved stimulating. French merchants bought tobacco, oil, soap and cotton cloth from Palestine. From Volney's account (1783-85), there is indication of increased French activity. In some parts of the country, agriculture thrived; there was extensive activity in soap manufacture, cotton spinning, weaving, manufacture of "sacred" articles, and wine-making.

Local Arab sheikhs maintained their own primitive variety of public order throughout Palestine. If they met their tax quotas, they were little troubled by the central Turkish administration. Their local battles, raids and counter-raids, might devastate the country, but Constantinople was little concerned. The Napoleonic invasion caused extensive destruction in the coastal plain, especially around Jaffa and Acre. John Carne described the condition of the country about 1830 as desolate and half barbarous; the inhabitants, he said, were inactive and despondent because they "fear, with justice, that the fruits of their labours may be suddenly reaped by any of the oppressive or marauding chiefs who have the strongest hand at the moment". The subsequent wars, between Mehmet Ali and his son Ibrahim Pasha on one side and the Sultan and Britain on the other, meant further devastation and a specially heavy load of war taxation and conscription.

THE LAST CENTURY

During the reign of Mehmet Ali, however, and under the influence of French ideas, a beginning was made in a great revolution not wholly complete even today. This revolution was the emancipation of the serfs. Feudal land tenure, feudal administration of justice, and a feudal military system had prevailed in Palestine and Syria since about 1250. The lord of a village was at once landlord, judge, tax collector, and military chief. His representatives supervised the agricultural work of the village from beginning to end. The serf (Fellah) could not appeal to the State against his lord. He could not leave the village without his lord's permission. He could legally be flogged, jailed, and—under some conditions—even put to death by his lord. Rents payable by the Fellah were nominally one-quarter or one-third of the produce in the hills, one-half in irrigated land, one-fifth to one-seventh in newly colonized lands or areas open to bedouin and other enemy assault. In practice, Volney reports, at the end of the eighteenth century, landlords generally levied one-half to two-thirds of the crops. In addition to his rent, the Fellah had to pay all kinds of local taxes, "gifts" to his lord, and irregular exactions. In fact, the Fellah was little better than a slave. His recent emergence from abject slavery must always be recalled before any unflattering judgment is passed on his innate capacity by mere reference to his present cultural and economic condition.

In 1811 Mehmet Ali, acting under the stimulus of the example of the French Revolution, gave the serfs the right to lay complaints with Government officers against their own lords. In the following years, all feudal jurisdiction was abolished. In 1833-35, Mehmet Ali abolished the last remnants of the feudal military system. In 1838 he abolished the system of "farming" out to local lords the collection of rents and taxes on the State domain. The crown lands (Miri) cultivated by villagers were removed from feudal authority, the lords retaining only their demesnes lands. Mehmet Ali and his son Ibrahim Pasha were great proponents of the idea of state-directed and financed economic development. They made a start in such activity in Palestine. The Turkish rule, reestablished by British intervention (1840-41), had no such ideas of government-assisted economic development. Yet even the Turkish administration continued the work of abolishing the feudal system.

The system of rural land tenure that was most general in medieval Palestine involved periodic redivision of the land. Each clan in a village was entitled to a fixed share at repartition, and the clan in turn redivided its land among its members in accordance with the number of working animals owned by each. In 1860 the Turks attempted to establish compulsory registration of land titles and to give each individual who wished to withdraw from the communal system a fixed and transferable share in the land. In many villages, however, no real registration or division of the land was carried out—the Fellaheen fearing these measures as new ways to extort taxes or increase conscription. Communal tenure persisted, the land was fictitiously registered in the names of four or five notables who were important enough people to take care of themselves in matters of taxation or conscription.

After 1860 the Turkish administration increasingly sold uncultivated lands (Mewat) to private individuals. As the old villages were concentrated for the most part in the safer hill districts, these uncultivated lands lay primarily in the plains and on the margins of the desert. Much of such land was bought by favored Government officials (effendis). So important was this land acquisition in the formation of large estates, that in time the term "effendi" became synonymous with "estate-owner".

In the latter half of the nineteenth century and especially in the quarter century before World War I, economic progress was noticeable. In part this was due to the general slow percolation of Western techniques, in part to European colonies (German Christian as well as Jewish) established in the country, and in part to the funds made available by the increased flow of pilgrims and tourists. Yet the backwardness of the country remained the despair of every informed student or traveller. M. Russell, who published his description of Palestine in 1850, emphasized "the state of barbarism in which the great mass of the present population is immersed". He drew striking contrasts, for many regions of the country, between evidences of ancient prosperity and the omnipresent contemporary squalor. In 1877, Colonel C. R. Conder, found the land empty; he believed that, with greater skills, the country could support ten times as many people. T. E. Lawrence in 1909 (at the age of 20), tramping from one end of Syria and Palestine to the other, could not restrain his disgust with the decayed state of the country, relieved only by the bright spots created by the early Jewish colonies. ". . . everywhere one finds remains of splendid Roman roads and houses and public buildings. . . . Also the country was well-peopled, and well watered artificially: There were not 20 miles of thistles behind Capernaum! and on the way round the lake they did not come upon dirty, dilapidated Bedouin tents, with the people calling to them to come in and talk, while miserable curs came snapping at their heels: Palestine was a decent country then, and could so easily be made so again. The sooner the Jews farm it all the better: their colonies are bright spots in a desert." Lawrence's impatient youthful reaction to backwardness must not be confused with a serious judgment of the potential roles of the Arab and Jewish peoples in the progress of Palestine. It is a measure rather of the revulsion aroused in a mind aware of Palestine's historic development by the sight of her decayed condition on the eve of World War I.

ZIONIST BEGINNINGS

It was to repair that decay and to build a Jewish national home in the historic Land of Israel that a new type of Jewish immigrant began to appear in Palestine in the latter half of the nineteenth century. In 1845 there were only about 12,000 Jews in all Palestine. They were very poor and in large part supported by non-Palestinian charity. Even in 1882, when there were about 24,000 Jews in the country, only about 480 lived in rural settlements.

The years from 1882 to the outbreak of World War I witnessed the successful Zionist beginnings. These were years of greatly intensified persecution of Jews in Europe. The worst center of persecution was Russia. *Pogroms*—massacres tolerated and occasionally incited by the Russian Government—occurred frequently. Tens of thousands of Jews were murdered. More were made destitute. The Jews of Russia were excluded (except in special cases) from the liberal professions and even from living in most of the country; it was made clear to them, in every possible way, that they were second class subjects. Anti-Semitism also gained a renewed hold in Central Europe. In the 1870's, a dispassionate French student of contemporary Germany, Ernest Lavisse, was shocked by the intensity of German anti-Jewish feeling. France also, however, made her contribution to European anti-Semitism, a contribution highlighted by the Dreyfus case; the France of Drumont and Maurras had much to teach Germany with respect to "racial" and"National" anti-Semitic doctrine—a teaching which German National Socialism has gratefully acknowledged. Everywhere in Europe, Jews felt organized terror, economic discrimination, or—at the very least—psychological persecution. They were not at home.

A mass emigration of Jews resulted. Between 1880 and 1910 more than three million Jews left Eastern Europe. Most of them went to the United States. Some went to England, Canada and South Africa. A few tens of thousands went to Palestine. In 1845 Palestine had about 12,000 Jews, in 1882 about 24,000, in 1890 about 47,000, and in 1914 about 85,000. Jews did not go to Palestine in larger numbers because the country had a reputation among them as impoverished, disease-ridden and disordered. Those who did go to Palestine had a strong preference for living in a Jewish community and a willingness to make sacrifices for that end. They wanted to work on the land. They carried with them ancient Jewish traditions of social and economic justice, heightened by contact with European socialism. The fusion of Zionist and socialist ideologies became one of the most pervasive aspects of the Jewish community in Palestine.

In spite of their preference for "returning to the soil", most Jewish settlers actually lived in the towns. In agriculture they had to overcome malaria and swamps, to acquire knowledge of techniques, to buy land and to make an initial unremunerative investment. Wineries failed; wheat was raised at a prohibitive cost; the Jaffa orange was in its beginning; dairying, poultry keeping, and vegetable raising were in their infancy. By 1914 the Jews had about 44 agricultural colonies, with about 12,000 inhabitants, and with about 440,000 dunums (110,000 acres) of land. These were the oases which T. E. Lawrence noted, amid the Arab Palestinian desert.

Compared with the solid economic progress made by Jews in the United States, during the years 1880-1914, the Zionist achievement in Palestine was indeed very small. Yet Zionists did not find this comparison overwhelming. Zionists have always questioned the permanence of the progress achieved by Jews in countries in which they are a minority. This questioning is a reasonable —even if, in some cases, erroneous—conclusion from Jewish history. The millennial record indicates how many times equal rights for Jews have been won and lost: Zionists could reasonably argue that they would probably be lost again. The Zionists rejected the idea that Israel should remain among the nations where it was persecuted to make itself a martyr—and generally a defenseless one—to the cause of equal rights. Moreover, even where Jews had nominally equal political rights, they were subject to economic discrimination and social exclusion. They were subjected to the "psychological persecution" of not being accepted as ordinary people, as a matter of course: even a Jew's merits were singled out for special remark—because he was a Jew. Therefore Jews tended to develop all sorts of superficially aggressive reactions, which were basically defensive. Only where Jews ceased to be a minority, argued the Zionists, would these problems of political, economic, social and psychological persecution vanish, a new healthy Jewish society be created, and a genuine Jewish contribution be made again to world civilization. The Jewish achievement in Palestine might appear, at the moment, to be small, but it was —so the Zionists argued—the only solid hope for the future.

Modern political Zionist organization begins with the work of Theodor Herzl. Under his influence, a World Zionist Organization was founded in 1897 at Basel. Yet Herzl was not uniquely interested in Palestine. He did emphasize the importance of political guarantees for a Jewish home. He did want to get a charter from the Turkish Government authorizing a Jewish colonizing company to control Palestine. However, he was willing to accept other territory as the soil of a Jewish State. He was interested in Sinai and was prepared to accept land in Africa. In this respect, however, at the Sixth Zionist Congress in 1903, Herzl was shown to be out of touch with mass Zionist aspirations—particularly those of the persecuted Jews of Eastern Europe. The fire of Zionism, required to withstand the trials of colonization, could be kindled only for settlement in the ancient Land of Israel. Jews would work, suffer and die to build a national home in Palestine, to which they were attached by all their historic memories. They would not die to reclaim the wilderness of Africa, South America, or Australia.

Herzl emphasized the political requirements of Zionism. Opposed to him were the "cultural" Zionists led by Asher Ginsberg (better known by his pen name *Ahad Ha'am*). For the cultural Zionists, Palestine was to constitute a spiritual center for world Jewry. Political aims were secondary. Israel should not give up her unique cultural heritage to concentrate upon the mean objective of being one among the nations. This difference of emphasis, with respect to the importance of the State in Zionist aspirations, has survived to this day. Along with this basic difference of approach has come the emergence of a "practical" faction of Zionists, who were disposed to defer all discussion of ultimate questions as much as possible, while getting on with the job of Jewish settlement and the economic upbuilding of Palestine. Herzl died in 1904, and with his death the "practical" faction gained control over the Zionist Organization. Yet these three basic tendencies, which emerged in Zionism shortly after the turn of the present century, have remained vital, in varying forms, to this day: a tendency emphasizing the need for a Jewish State to secure the growth of a Jewish national home in Palestine, a tendency disparaging the need for a new State to shelter the society and culture of all or any Jews, a tendency of "practical" men concerned with solving current issues while minimizing divisions by abstaining from taking a public position on ultimate questions.

ARAB AWAKENING

Four centuries of Ottoman rule did not bring a fusion of Arab and Turk. The Turks were the gendarmes of the Empire. They had no faith in a loose imperial rule over a multitude of self-conscious nationalities. From the beginning of the nineteenth century, nationalism had rent and torn the fabric of the Ottoman Empire among its Christian peoples. The Turks feared the diffusion of nationalisms among their Moslem peoples.

At the cradle of modern Arab nationalism, Christian and American and Lebanese influences were dominant. Perhaps the greatest single cultural influence in the early Arab revival was the school system established by American Presbyterians in Syria during the years 1820-1870. The apex of this system was the Syrian Protestant College (now American University) founded in 1866 at Beirut. Nationalism among the Christian Arabs of Syria was the exclusive property of a tiny educated class, and it retained this character when—in the decades preceding World War I—it acquired a hold among the Moslems of Syria (including Lebanon, Palestine and Transjordan) and Iraq. It was characteristic that the chief Arab civilian secret society, al-Fatat, was founded in Paris in 1911 by seven young Moslem students; in 1913, when its headquarters had been transferred to Damascus, its membership rose to 200. The chief Arab military secret society, al-Ahd, was composed of officers in the Turkish army.

Most characteristic of Arab nationalism was its exclusive concentration on national political objectives. Its program was concerned primarily with (1) the status of the Arab language, (2) equal access for Arabs to all public offices, (3) decentralization, autonomy, or independence for the Arab lands, and (4) limitation of Arab conscript service to the defense of the Arab lands. Only the fourth point was a matter of mass interest. The Arab nationalists were short on political democracy and blank on social democracy. Arab nationalism, on the eve of World War I, could—with little injustice—be called a movement of the Arab privileged classes.

It would, therefore, be an error to think of Syrian or Palestinian society as tense with self-conscious Arab nationalism on the eve of World War I. There was a great deal of smoldering anti-Turkish feeling. There was also an amorphous common consciousness of Arabic-speaking subjects as distinct from Turkish masters. But it was only in a very restricted circle that Arab nationalism had become more articulate than this. The land west of the Jordan later demarcated as Palestine had about 600,000 people and its counterpart east of the Jordan had about 200,000; of this 800,000 about 85,000 were Jews, and of the remainder at the very most ten per cent—largely Arabs of the towns—may have had some idea of political nationalism.

About 80 per cent of the Arab population of Palestine—east and west of the Jordan—were bedouins, semi-nomads, or peasant cultivators. The bedouins were poor, ignorant and non-political. No Europeans of the twentieth century have known the bedouin better than T. E. Lawrence and A. Musil, and both have testified clearly to his unwillingness to fight for any cause or creed dissociated from plunder. Lawrence emphasized the instability of his bedouin force, its abandon when confronted with booty, its inability to take casualties, its unconcern for any wider political objective than tribal customary rule. "Constructive policies, an organized state, an extended Empire, were not so much beyond their sight as hateful in it. They were fighting to get rid of Empire, not to win it . . . Their acquisitive recklessness made them keen on booty, and whetted them to tear up railways, plunder caravans and steal camels; but they were too free-minded to endure command or fight in a team . . . One company of Turks firmly entrenched in open country could have defied the entire army of them; and a pitched defeat, with its casualties, would have ended the war by sheer horror." Musil emphasizes the emptiness of the Holy War of Islam as a slogan to captivate the bedouins. "They did not know much about Islam, and Islam had no ties to which to link them to the Government . . . Had the Turkish Government guaranteed them a large booty from the war, they would have risen against the British; on the other hand, if the British had promised that they would be permitted to loot the settlements subject to the Turkish rule, they would have risen against the Turks. It is only the desire for booty that inspires the inhabitants of the desert to great deeds; they have no conception of love for one's country or one's religion."

The Fellah was too poor, too illiterate, too restricted in vision to be a self-conscious nationalist. The Arab landlord and moneylender were even more prominent among his afflictions than the Turkish tax-gatherer or conscription officer. It is difficult for those accustomed only to Western societies to imagine the poverty in which the Fellah lived. His house consisted usually of a single room, divided into a raised portion (about three-quarters of the space) and a lower portion near the door. There was no chimney and no window. On the raised portion of the single room, the family would live and keep its bins for corn, dried figs, lentils, etc. On the lower part, at night and especially during the winter, there would normally be housed a horse, a donkey, perhaps a cow or goats, and fowls. The lower portion would also contain the farm implements and firewood. Such was the house of an average peasant. A well-to-do peasant would have more than one room, a very poor one would have a house without mortar and with the whole floor level with the ground. Peasants, semi-nomads, and bedouins were almost 100 per cent illiterate. There was no village school and no village doctor or pharmacist. Malaria was very widespread; trachoma and other eye diseases producing blindness were common. The peasant ate better than the semi-nomad or the bedouin—though also commonly only one regular meal a day. He ate bread and he might also have a few figs, olives, a bunch of grapes, or fresh vegetables. He bought coffee, and—if the family was well off—rice or lentils. For a feast day, he would have meat.

The Arab peasant was likely to feel that, along with the Turk, the rich Arab landlord (effendi), the religious hierarchy, the moneylender, the professional man of the city—all stood on his back. The agricultural laborer earned the equivalent of 15 to 30 U.S. cents per day. The tenant earned little more. Peasants often borrowed money on the system of *asharah chamestash* in which the moneylender received, for a loan between sowing and harvesting, a return of 15 units for every 10 lent; since the period between sowing and harvesting varied from four to eight months, the rate of interest ranged from 75 per cent to 150 per cent per annum. A peasant's accumulated debts were quite often greater than his annual gross income. Many Arab villages consisted entirely of peasants who were hopelessly in debt to an urban effendi, who might live in Beirut, Cairo, or even Paris: these people were in fact debt slaves, whatever their nominal legal status. An Arab nationalism without social and economic content was beyond their understanding and interest.

WORLD WAR I

To curry favor with the victors, and to support their political claims, both Arabs and Jews have greatly exaggerated their military contributions to Allied victory in World War I. Since most Arabs lived in lands under Turkish rule, most of them fought for Turkey and the Central Powers. Since most Jews lived in Russia, the United States, and other Allied countries, most of them fought for the Allies; however, the Jews that lived in German or Turkish lands fought just as uniformly for their Governments as the Jews on the other side. In World War II, Jews the world over were united 100 per cent in firm support of the United Nations, while the Arab world was lukewarm, indifferent or hostile to the cause of the United Nations.

In 1914-18 the Arabs of the greatest Arabic country, Egypt, were dominantly indifferent or hostile to the Allied cause; C. R. Cruttwell describes them as ". . . sullen and mainly desirous of a German victory which might bring them independence . . ." In the Arabian peninsula, only the Hejaz came out effectively for the Allied side; the other States were neutral or hostile. In Syria and Palestine, both the Arab and Jewish communities contained insurgent elements, and—especially in the later years of the war—the Turkish administration viewed them with open suspicion, but there were no popular revolts even in the last days when the British advance had become a "mopping up" operation. In Mesopotamia, the Arab population was hostile to the Allied advance. Indeed, the only fighting force contributed by the Arabs to the Allied advance were the bedouin desert raiders, guided by T. E. Lawrence, on which Britain spent more than £10 million. A similar contribution to the Allied cause was made by the special Jewish legion—but at only the normal soldier's pay.

The war in the Middle East began with the closing of the Suez to the passage of ships flying the flags of nations at war with Great Britain. British troops took up defensive stations on both sides of the canal. In January 1915 and in August 1916, the Turkish forces delivered unsuccessful assaults against the canal. Then the British forces, under Murray, went over to the offensive. In March

1917 they stood before Gaza. There, however, the British forces suffered two defeats, incurring some 10,400 casualties as compared to only 4,400 for the Turks. In consequence of this check, Murray was recalled and replaced by Allenby.

By October 1917 Allenby had 75,000 infantry and 17,000 cavalry compared to 42,000 infantry and 1,200 cavalry on the Turkish side. Refraining from a frontal attack on Gaza, Allenby on October 31, 1917 struck at Beersheba, took that important communication center and water supply, and thereby was able to flank Gaza. Before the end of 1917 he was in Jerusalem. There, however, his advance stopped, because of the more urgent need for some of his units on the Western front. It was September 1918 before the British had been sufficiently reinforced and the Turkish power had been bled sufficiently on other fronts to permit Allenby to resume his advance. When the battle was opened again, on September 19, 1918, Allenby had every advantage in numbers and supply. The Turkish forces were crushed. On October 2 Damascus fell. By the time the Armistice with Turkey was signed, British troops were in Aleppo. After four centuries, Ottoman rule was at an end.

CHAPTER 6

THE EXPERIENCE OF THE MANDATE

PROMISES

Long before the Ottoman Empire had been destroyed, the Great Powers allied against it had laid preliminary plans for the division of Ottoman territory. So far as Palestine was concerned, those plans consisted principally in the project of setting up a Jewish National Home. Yet, in the maze of pledges given during those years, there was some ground for the belief, on the part of some Arabs, that they had also been promised the inclusion of the Holy Land in the territory of an Arab State.

Considerable discussion took place within the British cabinet before it was decided that espousal of the Zionist cause in Palestine was fair to Arab interests. Finally, the British cabinet authorized its Foreign Secretary, A. J. Balfour, to declare British support for Zionism. This step took the form of a declaration embodied in a letter which Balfour sent to Lord Rothschild on November 2, 1917. The letter read:

> I have much pleasure in conveying to you, on behalf of His Majesty's Government, the following declaration of sympathy with Jewish Zionist aspirations which has been submitted to and approved by the Cabinet:
>
> His Majesty's Government view with favour the establishment in Palestine of a national home for the Jewish people, and will use their best endeavours to facilitate the achievement of this object, it being clearly understood that nothing shall be done which may prejudice the civil and religious rights of existing non-Jewish communities in Palestine or the rights and political status enjoyed by Jews in any other country.
>
> I shall be grateful if you would bring this declaration to the knowledge of the Zionist Federation.

On February 9, 1918, France declared her adherence to the declaration. On May 9, 1918, Italy adopted the same position. President Wilson had been consulted on the Balfour Declaration prior to its issuance, and he had indicated his approval. On March 3, 1919, Wilson stated: ". . . the Allied Nations, with the fullest concurrence of our own government and people, are agreed that in Palestine shall be laid the foundations of a Jewish Commonwealth."

What the Balfour Declaration meant to the responsible British statesmen of the time can be gleaned quite simply by examining the views of the Foreign Secretary, the Prime Minister, and the Secretary for War, who participated in its formulation. The Foreign Secretary, A. J. Balfour, explained, in October 1917:

> As to the meaning of the words "National Home", to which the Zionists attach so much importance, he understood it to mean some form of British, American, or Other protectorate, under which full facilities would be given to the Jews to work out their own salvation and to build up, by means of education, agriculture, and industry, a real centre of national culture and focus of national life. It did not necessarily involve the early establishment of an independent Jewish State, which was a matter of gradual development in accordance with the ordinary laws of political evolution.

In 1938, Mr. David Lloyd George, who was Prime Minister from 1916 to 1922, quoted the above statement by Balfour with complete approval, and then added:

> . . . there could be no doubt as to what the Cabinet then had in their minds. It was not their idea that a Jewish State should be set up immediately by the Peace Treaty. . . . On the other hand, it was contemplated that when the time arrived for according representative institutions to Palestine, if the Jews had meanwhile responded to the opportunity afforded them . . . and had become a definite majority of the inhabitants, then Palestine would thus become a Jewish Commonwealth. The notion that Jewish immigration would have to be artificially restricted in order to ensure that the Jews should be a permanent minority never entered into the heads of anyone engaged in framing the policy. That would have been regarded as unjust and as a fraud on the people to whom we were appealing.

Mr. Winston Churchill, who was Secretary for War at the time of the Balfour declaration, made his view of that pledge very clear in the *Illustrated Sunday Herald,* for February 8, 1920:

> If, as may well happen, there should be created in our own lifetime by the banks of the Jordan a Jewish State under the protection of the British Crown which might comprise three or four millions of Jews, an event will have occurred in the history of the world which would from every point of view be beneficial, and would be especially in harmony with the truest interests of the British Empire.

It is to be noted that Mr. Churchill spoke in 1920 of a Jewish State by the "banks" of the Jordan—plural, both the east and west banks. After 1922, it was to become a grave indecorum to refer to the Palestine pledge as having originally been given with respect to both banks of the Jordan.

As compared to these clear pronouncements, the promises made to the Arabs—with respect to Palestine—were very shadowy. They amounted only to general commitments to further the cause of Arab independence and self-government, commitments from which Palestine was not always explicitly excluded. Sir Henry McMahon, who was responsible for a major part of these negotiations with the Arabs, has said: "I feel it my duty to state, and I do so definitely and emphatically, that it was not intended by me in giving this pledge to King Hussein to include Palestine in the area in which Arab independence was promised. I also had every reason to believe at the time that the fact that Palestine was not included in my pledge was well understood by King Hussein." All the other responsible British officers who were concerned in these negotiations—and especially Sir Ronald Storrs and T. E. Lawrence—have expressed themselves clearly in the same sense.

Lawrence was particularly warm in his support of the Zionist cause. In a review of the outlook of the Arab world, published in *The Round Table* of September 1920, Lawrence emphasized the constructive role which Zionist colonization could play in the Arab world.

> The colonists will take back with them to the land which they occupied for some centuries before the Christian era samples of all the knowledge and technique of Europe. They propose to settle down amongst the existing Arabic-speaking population of the country, a people of kindred origin, but far different social condition. They hope to adjust their mode of life to the climate of Palestine, and by the exercise of their skill and capital to make it as highly organized as a European state. The success of their scheme will involve inevitably the raising of the present Arab population to their own material level, only a little after themselves in point of time, and the consequences might be of the highest importance for the future of the Arab world.

It was under Lawrence's influence that the Emir Feisal, later King of Iraq, worked for unity between Arab and Jewish nationalists at the Peace Conference. Feisal, then the most authorized spokesman of the Arab world, accepted the principle of Palestine for the Jews on the understanding that the Jews would work for the establishment of Arab self-government in the neighboring lands. Early in January 1919, Feisal and Weizmann signed a "treaty" agreeing upon the separation of Palestine from an Arab Syrian State. This treaty provided for the carrying out of the Balfour Declaration, the large-scale immigration of Jews into Palestine, and the protection of Arab rights. On March 3, 1919, Feisal addressed a letter to Felix Frankfurter (the present U. S. Supreme Court Justice) stating: "The Arabs, especially the educated among us, look with deepest sympathy on the Zionist Movement. Our deputation here in Paris is fully acquainted with the proposals submitted yesterday by the Zionist Organization to the Peace Conference and we regard them as moderate and proper. We will do our best in so far as we are concerned to help their attainment; we will offer the Jews a hearty welcome home."

THE MANDATE

The Balfour Declaration was enunciated on November 2, 1917. The Mandate for Palestine was not finally approved until September 29, 1923. Yet the Mandate reflects the basic principles which had been enunciated in 1917. In fact the Mandate includes the Balfour Declaration in its preamble. It imposes on the Mandatory the obligation of placing Palestine under such conditions as may secure the establishment of a Jewish national home. It provides for a Jewish Agency to advise and cooperate with the Palestine administration in such matters as may effect the interests of the Jewish population or the establishment of the national home. It instructs Great Britain, as the mandatory power, to facilitate Jewish immigration and to encourage close settlement on the land. And it provides for review by the Permanent Mandates Commission of the League of Nations to insure the coincidence between actual administration and the broad policy directives contained in the Mandate.

The authors of the Balfour Declaration and the Mandate recognized that they were enunciating a policy that would not command the support of Palestinian Arabs. They may well have underestimated the amount of Arab opposition, but they knew that there would be opposition. They deliberately imposed a political sacrifice on the Palestinian Arabs. Their justification for imposing this sacrifice was the dire need of the Jewish people. Its compensations were envisioned to include, first, the establishment of other independent Arab states, second, the international guarantee of equal individual rights to Palestinian Arabs, and third, the expectation that Jewish development in Palestine would further the material prosperity of the Palestinian Arabs. There is no evidence that anyone believed that these compensations would be accepted as wholly adequate by all Palestinian Arabs. The framers of the Balfour Declaration and the Palestine Mandate nevertheless believed that their decision to establish a Zionist Palestine represented the fairest attainable balance among the conflicting moral claims.

The policy of the Balfour Declaration and the Palestine Mandate, however, has prevailed only to a limited degree in the administration actually established by the British Colonial Office in Palestine. The reasons why actual British colonial administration in Palestine diverged substantially from the spirit and intent of the Mandate are many and complicated. They are often extremely intangible and therefore most subject to bias in weighting and summing up. We cannot expect our own assessment in this matter to commend itself equally even to all candid, dispassionate and well-informed persons. Yet it seems to us clear, on as dispassionate an assessment of the evidence as we can attain, that the weight of responsibility for failing to fulfill the moral and legal obligations assumed under the Balfour Declaration and the Mandate must fall on His Majesty's Government in the United Kingdom. That Government first failed to display firmness of purpose in carrying out its obligations and then abandoned those obligations entirely when they impeded her competition with Italy and Germany for Arab support in the Mediterranean.

The original British personnel for senior administrative posts in Palestine came largely from Egypt. This personnel was acquainted with the Arabs and with Arab national aspirations. It saw in friendship with the dominant elements in Arab society (or in awakening new, latent forces) the only firm basis for long-term British policy in the Middle East. Gertrude Bell, who was working in Iraq during those early years after World War I, was an intellectual leader of this school of thought; she (and her friends in senior British administrative posts in the Middle East) looked at Zionism as an effort to turn the clock back. Moreover, quite apart from any variety of pan-Arabism, enlightened British colonial policy—all over the Empire—was thinking more and more in terms of self-government for native peoples. It was difficult for British liberals to concede that, in this special corner of the world, a special political policy was justified. It seemed very strange to them that Palestinian Arabs should be denied self-government because they would use that self-government to exclude Jews. The world had suddenly become very complicated, and traditional liberalism was offended.

Moreover, concern for the position of world Jewry—and not merely for the individual Palestinian Jews one met every day—largely evaporated in the rub of day-to-day decisions. In the relative peace and progress of the 1920's, the general precarious position of world Jewry, which had been very prominent in the minds of those who drafted the Mandate, came to mean less and less to the Palestinian administrative official. Many issues which might well have been decided one way if a substantial part of world Jewry had been considered to be a protagonist were, in fact, decided otherwise because the administrator had before his eyes a small number of Palestinian Jews. How could he consider other than Palestinian Jews? Did these other Jews want to come to Palestine? Dr. Chaim Weizmann had spoken in 1919 of an annual Jewish immigration to Palestine of the order of 70,000 or 80,000. In fact—through whose fault was much in dispute—in the 1920's only about fifteen per cent of this number were actually coming in. The absence of Jewish population pressure in the 1920's fostered habits of thought and administration which were unreceptive to large-scale immigration. When such pressure materialized after the rise of Hitler, Palestinian administration could not readily be adapted to accommodate it.

The Jews complained of anti-Semitism among the British administration. The complaint was unquestionably, in part, justified. A certain amount of anti-Semitism is present in English—as in all Western—societies. It has not been absent from British administration in Palestine. The independence of the Jew, his aggressiveness, his proneness to think that (however thin his own educational and cultural achievement) he was at least as cultured as any British official—these aroused resentment and awakened latent anti-Semitism.

Furthermore the Jews complained that they were given, in Palestine, not merely a British administration but a second-class British administration. It became common for Jews to appeal against the prejudice, ignorance, and lack of imagination of the British in Palestine to the equity and constructive thinking of the British in Britain.

Palestine's administration was, it must be conceded, unduly loaded with pensioners from Allenby's army. Its departments were headed too often by individuals who should have been retired from the service. Moreover the Palestine administration suffered from being dominantly a Colonial Office service. In the period after World War I, the colonial service commonly ranked low in the preference of young Englishmen embarking on an administrative career. The best-trained Englishmen therefore rarely wound up in a place like Palestine. When the British Treasury was dominated by the economics of Keynes, most of the senior officials of the colonial service were still struggling for an acquaintance with the economics of Ricardo and Mill. Any broad conception of a constructive, initiating role for Government, in economic and social development, was beyond their reach. Their economic wisdom was that of the counting-house, with its pride in a neatly balanced set of books. The project of adapting the activities of Government to the building of a Jewish national home in Palestine did not evoke their enthusiasm. It was beyond their comprehension. They would not perseveringly adapt their work to the objective of fostering a Jewish national home in Palestine unless they received firm and clean-cut instructions from London to do so. No such instructions were given.

So it came about that gradually there was established in Palestine an administration very remote in its basic conceptions from the earlier ideas of Lord Balfour, Lloyd George, and Winston Churchill—and equally remote from those of President Wilson and the other Allied statesmen responsible for the establishment of the Mandate. To Balfour or Lloyd George, in 1917, it was the most natural thing in the world that Zionists should plan to create a Jewish majority in Palestine. To so cultured and historically-minded a senior British official as Ronald Storrs, in 1937, this idea of a Jewish majority was perverse "extremism". Yet no one could accuse Ronald Storrs of lack of acquaintance with the recent history of Palestine, the promises made, and the moral commitments assumed. In the hands of an administration that did not accept the premises of the Mandate, its most basic ideas gradually lost their hold, so that even the most honorable men were able to hold office in a Government at variance with the spirit of the Mandate without feeling, in any way, that they were participating in the violation of a moral trust.

Balfour, Lloyd George, and the other statesmen who were most influential in the establishment of the Palestine Mandate shared a conception of the State which involved a positive responsibility for economic and social betterment. Because the Zionists were specially agriculture-minded, the Mandatory was particularly instructed to facilitate agricultural development and close settlement on the land. In fact—as will be shown in greater detail in Part III of this study—the Mandatory Administration was guided by a quite different conception of the role of Government. That conception included no positive activity to develop agriculture or industry and only the most meager concern for public health, education or social security. The design of the Mandate was a Welfare State. Its reality was a nineteenth century Police State.

VIOLENCE AND RETREAT

The history of the successive modifications of the policy enunciated in the Balfour Declaration is, in detail, an undignified narrative of Arab violence and British retreat. Outbreaks of violence brought to the surface all the doubts concerning the wisdom of the Mandate, otherwise latent in the minds of British Governments and Palestinian administrators. Violence led to compromise and to a conviction on the part of those who used violence that it would always bring results. The British Governor of Sinai, C. S. Jarvis, has testified eloquently to the conviction, universal in the Middle East during the 1920's and 1930's, that a display of violence would make any British government give way. So a reward was always available for those morally prepared to use the weapons of murder and arson.

One delusion, sedulously nourished by some Zionists—and by some of their friends all over the world—must be exposed mercilessly. That delusion is the idea that Arab opposition to Jewish immigration was the work of a few "effendis" or "agitators"—or even only of the British. This contention is nonsense. Arab opposition to Jewish immigration was wide and deep, though more articulate and explicit in the more educated and articulate classes. In this matter, we will do well to follow the keen mind and sharp pen of Ronald Storrs in exposing a Jewish blind spot. To the Jews, when they were deluding themselves, says Storrs:

> The Fellah, the peasant, was a fine fellah, a stout fellah, with all the bluff and blunt virtues conventionally ascribed to peasantry by those who know it least. He was also unorganized and inarticulate. The *Effendi* on the other hand was a decadent "capitalist" parasite, a selfish obstructive agitator of an Arab majority not ill disposed if only "left to themselves". His "small clique" of "feudal gentry exploiters" was bound in the end to be "eliminated" and so entitled to no quarter, even if some British officials chose to be taken in by his veneer of "cringing" good manners.

The role of the Arab upper classes in the nationalist movement was that of organizers and sponsors of a sentiment that would have remained amorphous and inarticulate but for their leadership. That is the role of the upper classes and the "intelligentsia" in any nationalist movement, particularly among a backward people. The Arab upper classes took the lead against Zionism not because it damaged them economically—on the contrary, they profited from it greatly—but because it threatened to impose upon them the political sacrifice of giving up the seats of power in a Palestinian State. Had that sacrifice been regarded as unavoidable, the Arabs might have become reconciled to it (as a burden imposed by forces beyond their control), and then they might have turned their attention to extracting the maximum of economic and cultural benefits from the Mandatory set-up. In fact they quickly found reason for believing that violence would bring modification of the Mandate and that, therefore, there was no reason to accept the Mandate as a framework within which they would have to work.

The history of the Mandate has been told so many times—ably by the Peel Commission, most searchingly by Dr. P. L. Hanna—that we cannot see any purpose in recapitulating it here. The implementation of the Mandate, with respect to economic developments is, in any case, explored in Part III of this study. It may, however, be of value to outline—as an epitome of what was to come thereafter—the political experience of the years 1920-22.

At the Easter season in 1920, organized anti-Zionist riots in Jerusalem led to the killing of Jews. Ronald Storrs, who was at that time Military Governor of Jerusalem, identifies the Husseinis as the principal fomenters of the riots. Storrs relates (sorrowfully) with what great consideration, even tenderness, the Palestine Administration treated the Husseinis. Haj Amin al-Husseini, though convicted for organizing the riots, was rewarded by being appointed, by the Government, to the position of Grand Mufti of Jerusalem. In this manner the Palestine Government established its reputation for "fairness" to those groups who were the deadly enemies of the policy that that Government had been instructed to carry out. The Mufti was a valued friend of many senior British officials, in Jerusalem. (See, for example, the warm esteem expressed by Humphrey Bowman, who was in charge of Palestine's public education during these years, in his *Middle East Window*, London, 1942.) During World War II, he was an equally valued aide of Herr Goebbels, in Berlin.

Palestine was not opened to immigration until September 1920. From September 1920 to April 1921, about 10,000 Jews came into the country. On May 1, 1921, an Arab mob attacked the Zionist Commission's immigration office in Tel Aviv, killing thirteen persons. In the next six days, Jewish colonies at Kfar Saba, Ein Hai, Petah Tikvah, Hadera and Rehovot were attacked by armed Arab bands. During the following week, the Government suspended all Jewish immigration into Palestine. It was under these circumstances that Mr. Winston Churchill, as U. K. Colonial Minister, took —to borrow Ronald Storr's language—his "swift momentous decision to accept and install the Sharif Abdallah as Amir of Transjordan". In August 1921 the Government of the United Kingdom published its first partition of Palestine, whereby Transjordan was withdrawn from the area in which the policy of the Jewish national home would be carried out. Some 37,400 sqare miles (of which about 80 percent receives less than 5 inches of rain per year) was allocated to Transjordan and about 10,400 square miles (of which about 40 percent receives less than 5 inches of rain per year) was left in Palestine. In July 1922, the Government of the United Kingdom, in the Churchill-Samuel White Paper, took a further step in reversing the policy enunciated in 1917 by repudiating any intention of making a Jewish State of Palestine and emphasizing the role of Palestine as a cultural center for Judaism rather than as a national home for large numbers of Jews. Arab violence had "paid off" in the most brilliant way.

Other crises took place in 1929-30 and 1936-37. Each was marked by the same sequence: Arab violence, temporary checking of Jewish immigration, and permanent projects for partition or elimination of Jewish immigration. In the years 1920-39, the successive crises—each leading to the thought that the policy of the Jewish national home might be abandoned—were severe brakes upon Jewish migration to Palestine. They did not, however, lead to an absolute stoppage of the Jewish inflow. For the greater part of these years, the governing principle of immigration policy was the "economic absorptive capacity" of the country to assimilate new arrivals. Over time, the Palestine Administration tended to define the economic absorptive principle more restrictively. The capital sufficient to qualify an immigrant for entry as a "person of independent means" was raised from £P 500 in 1926 to £P 1,000 in 1930. The definition of immigrants qualified to enter as "dependents" was gradually narrowed. Only assured job openings were considered to justify immigration of laborers. Yet immigration continued, and only in the years 1932-35 was there strong evidence of actual labor shortage.

The contrast is striking between the controlled immigration of Palestine and the free immigration which made possible the development of the United States. The American plains might still be waiting for the plow if someone had been obliged to prove, in advance, the existence of economic opportunities in the United States in the manner in which proof has been required in Palestine. "Economic absorptive capacity" was estimated for six months forward. A 40 percent sample was taken of all industrial establishments; employers' estimates of their job requirements were checked against actual experience. A visit was made to every new establishment created during the previous six months. In agriculture, every single orange grove was checked individually for each occupation. The Government of Palestine did not conceive of "economic absorptive capacity" as something to be created by its own enterprise and stimulus. It was a principle of restraint on Jewish claims to bring immigrants into the country and to provide productive employment for them.

This immigration policy of the "economic absorptive capacity" was abandoned temporarily in 1937 and permanently in the MacDonald White Paper of May 1939. The new policy was frankly political rather than economic. To understand this new policy, one must give due weight not only to the specific Palestinian background but also to the then dominant British foreign policy of "appeasing" aggression everywhere. In the face of a threat of European war and of Italian and German efforts to win Arab support, British policy swung around almost completely to the Arab position on Jewish immigration into Palestine. The Jews would have to support Britain against Germany anyway; the Arabs needed to be won.

The immigration policy established in 1939 was the following:

> Jewish immigration during the next five years will be at a rate which, if the economic absorptive capacity permits, will bring the Jewish population up to approximately one-third of the total population of the country. Taking into account an expected natural increase of the Arab and Jewish populations and the number of illegal Jewish immigrants now in the country, this would allow of admission, as from the beginning of April this year, of some 75,000 immigrants over the next five years. . . . After the period of five years no further Jewish immigration will be permitted unless the Arabs of Palestine are prepared to acquiesce in it.

This immigration policy was denounced, as cowardly and dishonorable, by a large number of members of both houses of the British Parliament—most forcefully perhaps by Mr. Winston Churchill. As a modification of the Mandate, it has not been approved by the League of Nations. Yet even the Churchill Government, which was in office from early in 1940 to July 1945, carried it out rigorously. Indeed practice has been more severe than profession. While the White Paper anticipated the entry of 75,000 immigrants by April 1, 1944, on that date only about 55,000 had actually been admitted. The only modification of the White Paper so far achieved is that the British Government has agreed to admit 1,500 Jewish immigrants per month until a new formula is worked out.

Even after April 1, 1944, however, the British Government attempted to postpone the day when the quota would be exhausted and the policy issue faced, by barring the use of further certificates to any Jews other than those coming from enemy *occupied* territory, when it was highly improbable that more Jews would escape from enemy controlled areas. Not until October 1944 was this policy relaxed and some 10,300 certificates turned over to the Jewish Agency to be used for Jews in liberated areas and non-enemy territories—at a rate not to average over 1,500 per month!

Throughout the war years, the Palestinian Administration adopted every possible device, including deportation of refugees who had entered without permission, to discourage potential refugees from pouring into Palestine. The background against which this policy must be seen is the extermination of five million Jews in Europe. It was universally remarked upon by Jews that the execution of a few American fliers by the Japanese or of a few British prisoners by the Germans evoked a deep and widespread horror among the United Nations, while their own immeasurably greater losses met with polite expressions of concern and fundamental indifference. Hence, the bitterness which prevails today among Jews against the Mandatory administration and the almost universal attitude of regarding it as an alien force.

THE MANDATE AT THE END OF 1944

The 1939 abandonment of the policy of the Jewish national home did not win the support of Arab Palestine for the cause of Great Britain and the United Nations during World War II. There was much in the authoritarian tradition of National Socialism and Fascism that was very attractive to the dominant elements in Middle East societies. The Grand Mufti of Jerusalem lived in Berlin during the war years. None of the "better families" of Arab Palestine gave their sons as volunteers to the United Nations forces. In fact, all recruitment in Palestine having been voluntary, the number of Arabs in Allied armed forces was so small (and the desertions, by unofficial report, so high) that the Government has been unwilling to publish figures on volunteers from Palestine showing the Jewish and Arab shares. Unofficial but reliable figures show that by March 1, 1945, the Jews had furnished 25,200 volunteers (men and women) compared with 9,150 for the Arabs. If allowance is made for the difference in population, the Jewish rate of volunteering was about six times as great as the Arab one.

Moreover, British prestige and moral authority are not unquestioned in the Arab world. We found that, at the end of 1944 and early in 1945, Arabs in the Middle East were prone to place a disrespectful emphasis on the large forces utilized by Britain in the Middle East for the purpose of throwing back the tiny force which Rommel launched against the Nile. Arabs who pretended to a knowledge of world affairs were inclined to disparage the British military "show" in World War II as compared to the Russian. A unilateral British enunciation of a new policy with respect to Palestine would not be accepted as firm, by the Arab world, unless it coincided fully with Arab desires. If the proposed policy were substantially different from what the Palestinian Arabs wanted—and it were enunciated by Britain alone—the Arabs would, no doubt, resort to violent resistance: violence has always worked hitherto. Furthermore, the Arabs would attempt to get support from the U.S.A., France, the U.S.S.R., or any other power that might be interested in their cause. Only against a united front of the Great Powers would violence be deemed useless.

The moral authority of an exclusively British solution of the Palestine question would mean even less to the Palestinian Jewish community. Here the great moral divide came at the time of the initiation of the mass-extermination policy in Nazi Europe, when it became clear that the British authorities in Palestine—like the responsible authorities of other countries—were not prepared to make Palestine a refuge from death. Before that time, there were profound differences between the Jewish community and the Mandatory Government. But then a moral abyss opened which has not yet been closed.

The Jewish community in Palestine knows that, if the 1939 decisions are re-examined, it will not be primarily because of Palestinian efforts. It will not even be because of the tragedy of the Jews of Europe. It will be because of the pressure of Zionist sympathizers—in and out of governments—in Britain, the British Dominions, and the United States. It may also be because a measure of sympathy with Zionism has been aroused in responsible circles in the U.S.S.R., in France, and in other countries. No decision which asks Zionists to abate something of their full program will command more than a coerced compliance from them unless it is made by at least a substantial part of this group of nations. It may command only a reluctant compliance in any case. An increasing number of Palestine's Jews have become convinced, by Arab example, that only violence wins respectful consideration. If that is the price required for consideration of their claims, they are prepared to pay it.

As matters stand now, the British authorities—both in London and in the Middle East—also would prefer to have postwar policy with respect to Palestine enunciated by a wider authority than their own. This is a very firmly held, and freely expressed, preference. The British authorities describe this situation by saying that they alone have had the responsibility for action while others have been free to criticize; now they would like to share the responsibility.

How genuine is this determination to share the responsibility for policy? Does it amount merely to a desire to establish a powerless international commission, which would share the blame for policy, while the effective power of decision would remain with the United Kingdom's Colonial Office? At the end of 1945 these questions were still unanswered. But the questions point to important issues. The right of review formerly exercised by the Permanent Mandates Commission did not prove effective. The Commission could review policy only long after the event. It could not secure action even on those rare occasions when it ventured to recommend specific action. No Great Power will be willing to share responsibility for Palestine policy without sharing authority in an effective way. No Great Power will be willing to share in paying the piper without taking a turn at calling the tunes. At the end of 1945, there was little evidence of progress towards a joint international authority with a common Palestinian program. At the same time, it was universally recognized that the surviving ghost of the Mandate needed replacement by some authority which would command greater respect and would proceed on the basis of a clearly defined long-term policy.

CHAPTER 7

PALESTINE AND THE ARAB WORLD

THE ARAB POSITION

The Arab world insists, with a single voice, that the fundamental principle of long-term policy with respect to Palestine must be the establishment there of an independent Arab State. The Arabs profess no lack of sympathy with the plight of homeless Jews. But they deny that the solution for Jewish homelessness is a National Home in Palestine. Why, they ask, should Palestine be singled out? Why not settle homeless Jews in the United States, in England, Canada, or Australia? Why should the Arabs be asked to give up their claim to ultimate sovereignty over a land in which they are now—and have been for centuries—an overwhelming majority? What right have Western statesmen to promise another people a national home in an Arab land?

Three principal lines of argument are commonly advanced against the idea of converting Palestine into an Arab State. These are: (1) that there are several other Arab States, with a total area more than a hundred and sixty times as great as that of Palestine (and with potentially rich undeveloped land) while Jews have no State of their own; (2) that Jews have a special claim to Palestine based on historical connection, international pledges, and need; (3) that Jewish development in Palestine is bringing great economic benefits to the Arabs; and (4) that, under the mandate, several hundred thousand Jews have already settled in Palestine and have contributed greatly to its development.

None of these arguments, however, has any force in Arab ears. Raising these lines of argument with a Syrian nationalist, we were asked in return, "Is the United States prepared to give up one of her 48 States to Italy or Poland if it be shown that they are overpopulated and need more land? Does not the United States have 47 other States, which still have great possibilities of development?" With all due consideration of the imperfections of the analogy, the Syrian was pointing to a fundamental truth.

No nation has ever stood in judgment against itself and said: "Here is a part of our national territory. We live in it. We give it willingly to another nation which needs it more than we and which can develop it more fully than we can. We ask only that our nationals, who remain in the ceded area, be treated fairly by the new national sovereigns. We will be satisfied if our nationals benefit economically and culturally from their new status."

If judgment is to be given in favor of facilities for Jews to establish a Palestinian commonwealth, with a Jewish majority, that judgment must be given against the clearly-expressed desires of the Arab world.

DEFENSE OF ISLAM

Religion is not an important issue in the differences concerning Palestine. An effective majority of all three religions would be prepared to support the undisturbed practice of Christianity, Islam, and Judaism in Palestine. All three would be prepared to accept international control in so far as it is necessary to assure free access to the Holy Places of the three faiths. The religious issue is given prominence only by the extremely fanatical members of all three religions or by politicians—with motives quite unrelated to religion—who believe that their own solution of the Palestine problem can be pressed most effectively by making a great point of the thesis that any other solution would be profoundly offensive to their tender religious susceptibilities.

Since the Western World knows less about Islam than it does about Christianity or Judaism, this pious fraud is most successful when it is perpetrated in the name of Islam. But a fraud it is. It is high time that the Western World ceased to be taken in by bland assertions that, if this or that were done about Palestine, the whole Moslem world—from Morocco to Mindanao, and from the Congo to the inner reaches of China—would "burst into flame." Flames are lighted when and where there is reasonable expectation of high profit from arson.

Christians today are not profoundly interested, so far as the exercise of their worship is concerned, in the political status of Palestine. What they want in Palestine can be equally well secured whether Palestine is a Mandate, an Arab State, a Jewish State, or one of several other things. Christians desire free access to places in Palestine sanctified for them by association with Christ's mission or by subsequent religious occurrences. They are anxious to safeguard Christians living in Palestine against any discrimination. Many of them feel the need for sufficient international authority in Palestine to accomplish these purposes. Beyond these things, however, nothing in current Christian religious convictions prevents Palestine from being governed, in its ordinary secular affairs, by a people which is Moslem or Jewish. Christians, as Christians, do not wish to go to live in Palestine in any significant numbers, and it is inconceivable that any contemporary Moslem or Jewish administration would be allowed to place obstacles in the way of those few religious persons who do wish to go to live there.

Much the same situation prevails so far as the Jewish religion is concerned. It is arguable that the Jewish *nation* needs a Jewish State in Palestine, but the Jewish *religion* certainly does not. Many Jews by religion deny any connection with a Jewish nation. Jews can practice their religion anywhere, though to them—as to Christians and Moslems—Palestine is, in a special sense, a Holy Land. A small number of religious Jews feel drawn to live (and, still more, to die) in Palestine. These would account for only a few thousand out of the 385,000 net Jewish immigration into Palestine in the years 1919-44. A tolerant Moslem State or Christian Mandatory would unquestionably admit these religious persons, without any political difficulties.

The position of Islam in Palestine is a little more complicated than that of Christianity or Judaism. In one important respect, however, it is much simpler. No Moslems migrate to Palestine because it is a Holy Land. Palestine is not that important in Moslem religious consciousness. In other respects, however, there are some complications. In particular, since the Moslems are the most uneducated people of Palestine—and since their co-religionists in other countries are also predominantly backward peoples, it is comparatively easy to stir them up with rumors that foreigners have designs on their religion and holy places. To propagate such suggestions, and to excite religious fanaticism in the service of a political cause, has been the work of unscrupulous Arab politicians in several Middle East countries. In Palestine the chief practitioner of this infamous technique was Haj Amin el Husseini, the Mufti of Jerusalem. The Mufti failed, however, to interest the wider Islamic world in his cause. He found substantial support only in the Arab States of the Middle East (which contain only about one-eighth of all Moslems), and that support was on nationalist Arab lines, not on Moslem religious ones.

PALESTINIAN ARAB NATIONALITY

The interest of Islam in the future political status of Palestine is largely trumped-up and bogus, but the interest of Arab nationalism is genuine. Most genuine is that of the Arabs of Palestine.

Zionist effort has raised Palestine above the economic level of any other Middle East country. The Arabs have profited greatly thereby. It might very well be the course of reason for Palestine's Arabs to welcome Jewish immigration because of these economic benefits. However, they do not welcome it. They oppose it, and the more articulate they are—as a result of education and social status—the more articulate their opposition.

The Arab masses have no sophisticated ideas about nationalism. Only the small urban educated class knows even the traditional nationalist slogans. But sophisticated ideas are not necessary for a vague, amorphous opposition to the idea of having a "foreign" group become the dominant element in the country. That is all the nationalism that the Arab masses have in Palestine today. They are not articulate about it. Their middle classes, however, are more articulate, and—on this issue—they all speak with one voice. They want an Arab State and the stoppage of Jewish immigration. It is always a dangerous (as well as frequently a disingenuous) practice to appeal over the heads of a people's articulate middle-class intelligentsia to the untutored "good sense" of its inarticulate masses.

A sense of social and national responsibility is still almost nonexistent in the Arab countries. The family is the strongest tie. A man will take care of his own relatives and expects them to take care of him. The rest of the community can "go hang." The Arabs have little feeling of citizenship in the Western sense of the word, and little tradition of responsible participation in public affairs. They have no public philanthropy and no willingness to pay taxes. They have no real political parties—only groups cemented by personal and family allegiances. These are severe limitations on Arab political maturity. They reflect on the willingness of Arabs to make real sacrifices for nation, State or political program. They—together with the illiteracy and abject poverty of the masses—make it impossible for genuinely democratic government to be maintained in any Arab country today. But they do *not* constitute a denial of Arab anti-foreignism. In Palestine, Arab anti-foreignism means first anti-Zionism and second a desire to eliminate British rule and establish an independent Arab State.

The failure of the various Arab States to achieve unity also does not constitute a denial of the reality of Arab nationalism. It means, at most, that we should perhaps speak of related Arab nationalisms, in the plural, rather than of a single Arab nationalism. It is characteristic of this complexity of Arab nationalism that Palestinian Arab nationalists formerly refused even to use the word "Palestine", insisting that they were Syrians and that Palestine was only an artificial imperialist creation.

As yet, the Arabs of Palestine have not had occasion to show how far they are willing to go in pressing for the adoption of their national program. In the 1920's and 1930's, their victories were easily achieved. Their demonstrations of violence were not vigorously opposed by the Mandatory Government. (It is shocking to one not saturated in the Palestinian atmosphere that Sir Ronald Storrs, ex-military and civil Governor of Jerusalem, should refer to the 1936-37 riots as "the disturbances which could admittedly have been quelled much earlier.") The middle-class organizers of the Arab program of violence took little direct hand in it. There was no real warfare. The Arabs are not a military people. They relied on assassination, looting and arson.

The capacity of the Arabs of Palestine for offering armed resistance to a program of which they do not approve is, admittedly, extremely limited. Yet it is reasonably certain that they will offer *some* armed opposition to any Palestine program at variance with their national objectives. Violence has been too successful in the past to be discarded without a trial now. Organized violence may be difficult against a determined, reasoned program backed by all the Great Powers among the United Nations. But it seems unlikely that the Arabs of Palestine will acquiesce in *any* program that is at substantial variance with their demands (for an Arab State and stoppage of Jewish immigration) without at least sporadic, disorganized armed opposition. They will accept the frustration of their national program only as a necessity imposed by outside force. No responsible Government, therefore, can undertake to carry out in Palestine a program substantially different from that of Arab nationalism without preparing for the repression that such a program will necessarily entail.

THE ARAB STATES

The Palestine Arabs will receive demonstrative support, in pressing their national program, from the neighboring Arab States. In fact, each of these States is already on record publicly in support of an Arab State in Palestine. These more or less independent Arab States (including Egypt, Iraq, Syria, Lebanon, Transjordan, and the States of the Arabian peninsula) are not insignificant. They contain from 33 to 35 million people. They have a land area of about 1,650,000 square miles. Their capacity to bring pressure to bear on the Great Powers, who will be primarily responsible for deciding the future status of Palestine, is, however, extremely limited.

These Arab States have no economic power. They are miserably poor; in the prewar period, their per capita incomes did not average above £ 10 (say $50) per year. They have no munitions production. They have no military power. Their poorly-trained and ill-disciplined forces, barely adequate for internal policing, have no striking power outside their own frontiers. They are dependent, for the continued operation of all the "modern" aspects of their economies, on imports from Western countries. The very existence of these Arab States with (especially in the cases of Iraq, Syria, and Transjordan) large, potentially productive but undeveloped lands constitutes perhaps the strongest argument against the creation of yet another Arab State in the 10,400 square miles of Palestine, while the Jews have no other national home. Moreover, the Arab States have weakened their moral authority with the United Nations by the indifference or open hostility of their ruling classes to the United Nations during World War II. The rulers of the Arab States have made no contribution of manpower or material resources to the United Nations' war effort and have shown no interest in any foreign policy beyond that of emerging, at as little cost as possible, on the side of the victors.

Among the rulers of the various Arab States, only the Emir of Transjordan (under complete British control and subsidy) appealed to the Faithful, early in the war, to aid Great Britain. Ibn Saud remained silent. Egypt was neutral. Syria and Lebanon were more anti-French than anti-fascist. Iraq has often been cited by superficial observers, more attentive to legal forms than to social realities, as a model of mandatory policy. Until the establishment of an open pro-German government led to the occupation of the country by British military forces, Iraq remained the great Middle East center of German influence.

Contemporary Arab nationalism is emerging in a society which is, in many respects, more like that of western Europe four centuries ago than like that of Europe and America today. It is a "medieval", earth-bound and tradition-bound society, not a mobile individualist one. Family ties are quite strong. Communities are local, most of them are villages in great measure autonomous in their social, economic, political and religious life. Marriage outside the village is infrequent. Social status determines the occupation and aspirations of the individual. The "career open to talent" is so far from reality as to be unimaginable even as a political slogan. The State is an external force, grasping and hostile; it is to be evaded, cheated and thwarted wherever possible.

There was no autonomous social and intellectual ferment going on in Arab society when Napoleonic violence brought that society into the orbit of Western development. Rather its stagnation was so complete as to create—to the superficial Western observer—the image of an always "unchanging East". In fact there has been change. After a period of being completely "bowled over" by the Western imperialisms, the Arabs took to themselves the Western ideas of the rights of nations to "self-determination". Naturally, those ideas were taken up first by the upper classes. The masses in the Arab world are too poor for any but the most impulsive and superficial participation in politics. But the Arab upper classes have, in the main, succeeded up to now in carrying off the role of natural leaders in the struggle against foreign exploitation. Moreover, they have succeeded in giving the national issue sufficient prominence to cover a variety of sins of omission and commission in other directions.

The political aspirations of the ruling classes of the Arab world are not sufficiently united to make it possible for the various Arab States to merge in a federal union, in the near future. The ambitions of their several kings alone would be sufficient to prevent federal union. (Moreover, beyond Arab kingship, both Farouk and Ibn Saud reputedly aspire to be Caliph of Islam.) They cannot form a customs union, with internal free trade, because their fiscal systems are extremely primitive and they rely on customs as their principal source of revenue. Their economies are not complementary in any case, since only Egypt has any industry worth mentioning. They cannot establish a common legal system; that would require a uniformity of social and economic institutions which would take decades of growth, at the very least. They cannot merge armies. Several have no armies worth mentioning, and the others need their local levies to maintain their local authority.

But, apart from these remote goals of an Arab federal union, the Arab States can be of use to one another in more modest ways. Egypt would like a preferential position for her infant industry. Saudi Arabia wants facilities for her greatest industry, the pilgrimage to Mecca and Medina. Iraq's Sunni governmental faction may hope, through a tie with the Sunni majority of an Arab league, to be in a better position to withstand the pressure of her Shiite majority, which might otherwise bring about union with Iran and submergence of the present governing class. Syria may hope, too, by an emphasis on Arab nationalism, to be in a better position to overcome the pressure of autonomist minorities. And in addition to these things—and perhaps more important than all of them together—each of the Arab States hopes that an Arab league will strengthen its hand in dealing with "foreign exploitation".

Three issues are to the fore today in the program of freeing the Arab lands from "the yoke of imperialism". These are the complete elimination of French influence from Syria and Lebanon, the further reduction of British influence in Egypt and the Sudan, and the elimination of Zionism from Palestine. The third commands the most undivided Arab support. Many Christian Lebanese are troubled concerning the consequences of a French withdrawal from

Syria and Lebanon. Many conservative Egyptians welcome the economic and social influence of Britain. But no effective political force in the Arab world is opposed to the elimination of Zionism from Palestine.

The establishment of a Jewish National Home in Palestine may not be (indeed, certainly is not) seriously damaging to any of the Arab States. Several of them have undeveloped lands many times as large as Palestine. Yet, should the Great Powers adopt any solution of the future status of Palestine that diverges sharply from that desired by the Palestine Arabs, the Arab States will certainly demonstrate strongly against that solution. Such demonstrations will be the easier because they are in accord with their genuine nationalist desire to establish yet another Arab State. They will have the further advantage of intensifying "national" feeling at home and the final advantage of costing nothing. No Arab State need feel any danger of reprisal for its protests against the infliction of a Zionist "imperialism" on the Arab people of Palestine. The Arabs of the world will, therefore, speak with a single voice on the future of Palestine—and in this they are significantly different from world Jewry.

CHAPTER 8

PALESTINE AND WORLD JEWRY

JEWISH DIVERSITY

To be a Jew today may mean much or almost nothing. It means, at the very least, to be identifiable as connected by family origin with an ancestor who professed the Jewish faith. To be a Jew does not, however, necessarily involve actual current adherence to the Jewish faith. To insist on a "religious test" would exclude from the Jewish population certainly many hundreds of thousands—and perhaps millions—of persons now universally regarded as Jews. This exclusion would affect important numbers not only in countries like the U.S.S.R. and the U.S.A. but also in Palestine. Present-day world Jewry is not a particularly religious group.

To be a Jew today may mean any degree of subjection to persecution or discrimination—bodily torture and murder, denial of political equality, economic handicaps, social exclusion—or it may mean complete assimilation with persons of other origin. To be a Jew may mean any degree of contamination by persecution and its psychological after effects—the consciousness of being arbitrarily treated as "different" and its resulting defensive and aggressive reactions. It is consistent also with any degree or direction of sublimation of the reactions originally produced by the consciousness of this arbitrary discrimination. Finally, to be a Jew is compatible with any position on the desirability of living in a Jewish national community oneself and every conceivable view of the wisdom of other Jews participating in the establishment of a Jewish national community.

In the five years 1939-44, over five million Jews were killed or lived in conditions that were designed to produce premature death. An especially large portion of the Jewish population of eastern Europe was destroyed. Jews of central and western Europe also felt the lash of persecution and the hand of the executioner.

Many Jewish inhabitants of countries untouched by Nazi occupation have been led to think of the insecurity in which hundreds of thousands of other Jews live. They have been forced to ask themselves heart-searching questions concerning the possibility of an extension of the area of persecution, the success of their own efforts at national assimilation, and the probability of the achievement of a universal culture in which all men might participate without question of racial, national or religious origin. All have seen the doors of rescue effectively closed while millions of Jews were being killed. Few have had the courage to ask that Jews be saved from death by being admitted to their own countries. Even fewer, no doubt, will ask for the right of Jews—and other persons—to emigrate to developed countries when the war is over. But almost all are prepared to ask, with greater or lesser insistence, that such Jews as wish to go there be allowed freedom of entry into Palestine.

ASSIMILATION

The dominant trend among world Jewry today is towards cultural, social and national assimilation. This means the acceptance by Jews of allegiances which are either those of particular non-Jewish national societies or else allegiances regarded as universally valid for all men. Such Jews may have as much pride in their race and its historic accomplishments as any other people, but they do not see any value in the perpetuation of that race as a separate social, cultural or national entity. They generally have little affiliation with Jewish organizations and no authorized spokesmen on distinctively Jewish questions. Jews of this type are particularly numerous in the old territory of the U.S.S.R., in the U.S.A., in some countries of western Europe, and in the British Empire—wherever Jews have been accepted on a basis of comparative equality.

The willingness of Jews today to ignore the fact of their own Jewishness far outruns any corresponding willingness on the part of their non-Jewish neighbors. It is commonly the Gentile who forces the Jew to remain a Jew. The most glaring case of this situation is that of Germany. Most German Jews, even after the rise of Hitler, asked for nothing better than to remain Germans. They regarded the Nazi philosophy as a temporary aberration which the sane German mind would quickly throw off. Often only when the individual Jew felt the lash of torture on his own back, in Dachau or Orianenburg, did he become convinced that Germany had rejected him and that there was no compromising with that rejection. Palestine today contains hundreds of thousands of Jews who asked for nothing more than assimilation and who were forced into Jewish nationalism. Only a minority of Jewish Palestinians are individuals who in fact historically made a free choice of life in a Jewish national community in preference to life in

Western non-Jewish communities. Such a choice is the essence of Zionism.

Where assimilationist ideas (national or universal) are dominant, Jews have no desire to go themselves to live in a Jewish national community in Palestine. If they have any political allegiance beyond that to the country in which they live, it is an allegiance to an idea of international organization. Such Jews want nothing of Jewish nationality—for themselves.

It by no means follows that even assimilationists universally reject the idea of a Jewish nationality in Palestine for such Jews as desire it. Some assimilationist Jews certainly do fear that the establishment of a Jewish nationality for other Jews will tend to call into question the undivided character of their own national allegiance. But, in the face of the extreme sufferings of the Jewish people of Europe, such personal considerations are more and more reduced to silence. It is widely held today even by assimilationists that the conditions and aspirations of the varied Jewish populations of the world are so diverse that it is only perverse dogmatism to advise all Jews to find their salvation along any one road. A Palestinian Jewish nationality may have no attractions for a Jew in Chicago who feels his life to be bound up with the American community and to whom Judaism is only an historical memory and a family reminiscence. It may mean something quite different to a Jew from Lublin, who has never in his life been treated otherwise than as an outcast by his Polish neighbors, who has seen his family and friends murdered by the Germans, and to whom Judaism is religion, nationality and every spark of human feeling.

Even Russian assimilationism has recently shown some signs of a changed attitude towards Zionism, not for Russian Jews but for Jews in other countries profoundly corrupted by race bigotry. United States Jewish assimilationists are certainly not prepared to preach to the Jews of central and eastern Europe—as an exclusive road to salvation—the reliance on the education of non-Jewish peoples in racial tolerance and respect for human equality and dignity. Neither do the great advanced democracies of the West today have sufficient confidence in their own economic order or in their ability to educate immigrants rapidly to share their way of life to be willing to open their doors on a large scale to Jewish immigrants. Jewish immigration to Palestine therefore today commends itself widely, even to Jewish assimilationists, as a contribution to the solution of world Jewish problems.

JUDAISM AS RELIGION OR NATIONALITY

A special subgroup of partial assimilationists, which is particularly numerous among the "Reformed" Jews of the Western democracies, is the one for which Judaism has value only as a religion. This group has some ancient tradition in Israel. It goes back to one element in the teaching of the prophet Jeremiah.

At the time of the Babylonian exile, many Jews were profoundly troubled concerning how to reconcile their Jewishness with life in a non-Jewish society. Jeremiah sent them a letter, instructing them: "Build ye houses and dwell in them, and plant gardens and eat the fruit of them. Take ye wives and beget sons and daughters . . . And seek the peace of the land whither I have caused you to be carried away captives, and pray unto the Lord for it: for in the peace thereof shall ye have peace." A man could now be a Jew and a constructive citizen of a non-Jewish State.

Lest we falsify the historical record, it must be emphasized that Jeremiah considered this condition of Jews living outside the land of Israel as a temporary product of sin. After prayer and repentance, the captives would return to their homeland. For so said the Lord: ". . . ye shall seek me and find me when ye shall search for me with all your heart . . . and I will turn away your captivity, and I will gather you from all the nations and from all the places whither I have driven you, saith the Lord; and I will bring you again into the place whence I caused you to be carried away captive."

What Jeremiah saw as a temporary sorry necessity, those Jews who regard Judaism only as a religion see as a permanent and desirable condition. Though the proselytic activity of Judaism is negligible, they often speak of the dispersion of Jews as particularly desirable because it facilitates their mission of preaching to the world the idea of a universal God. In candor, these Jews are compelled to admit that some other Jews do exhibit Jewish "national" characteristics, a community of language, literature, customs, historic memories, common sufferings, and common aspirations—including the aspiration for a State of their own. But the Jew who values Judaism only as a religion regards such manifestations of Jewish nationality as retrograde, misguided—or, at most, of value to other Jews but not to himself.

In truth it must be said that religion also does not often occupy a very large place in the lives of those Jews who hold themselves completely aloof from Jewish nationalism. Two orthodox Jewish organizations, on the other hand, *have* been drawn into the current of contemporary Zionism: these are the Mizrachi and the Agudas Israel. The Mizrachi have been laboring since 1902 to see a new Palestine established along traditional religious lines; they are members of the World Zionist Organization. The Agudas Israel, though it once held the view that the Jews must be reestablished in Palestine only through the coming of the Messiah, now has its own colonies in Palestine; it remains outside the World Zionist Organization only because that organization is too secular for it.

To those Conservative and Reformed Jews to whom Jewish nationality is most remote, Judaism is in fact generally more a social institution than a religious one. Excluded from completely equal social intercourse with Gentiles, these Jews have tended to form a society of their own. The Reformed Temple is particularly likely to be one of the nuclei of that defensive society. But these Jews do not wish to turn their defense into what they conceive to be a retreat. They want to attain equality in a non-Jewish society. They do not want to be forced into Jewish nationality. They are fearful that, if a Jewish nation and State are established in some corner of the world, anti-Semitic Gentiles will say that all persons of Jewish origin should go there. These Jews want no part of such a Jewish nation and State, for themselves.

Yet it is true that even these Jews now commonly see a considerable role for Palestine in the Jewish future. They are troubled by the use of the word "Jewish" in connection with the ideas of "nation" and State. They would like to go as far as possible in reconstructing the life of Jews in Europe. They would like to see opportunities for Jews to migrate to countries other than Palestine. But they are also, in considerable numbers, profoundly concerned that Jews be permitted to go to Palestine.

JEWISH NATIONALITY

The largest role for Palestine in the Jewish future is claimed by those Jews who affiliate themselves firmly with Jewish nationality. Jewish nationalism today is substantially identical with Zionism, i.e., with the idea of building a Jewish national community in Palestine. The only other vital Jewish national movement of modern times, the eastern European Bund (General Alliance of Jewish Workers), is now dead.

No colonizing scheme other than that in Palestine commands Jewish nationalist support. Many Jews are perfectly willing to migrate, as individuals, to other countries than Palestine, under suitable economic conditions. But Jews with a strong feeling of nationality do not consider it wise to colonize outside of Palestine where their life as a self-contained "alien" group would be most subject to criticism if their efforts were successful. Non-nationally-minded Jews see no reason for living in colonies, by themselves, in Palestine or elsewhere: colonizing efforts based on such people are therefore lacking in the drive and initiative which are necessary to make colonization a success. Those who know something of the effort and investment which have been required to lay the foundations of a Jewish National Home in Palestine will not easily be attracted by the idea of starting it all over elsewhere—and without the fire of historic attachment. Moreover, no other areas have in fact been offered to Jews for self-contained national development. For these reasons, all talk of Jewish national development outside of Palestine is unanimously regarded as vain and misguided by thoughtful Jewish nationalists.

The center of Jewish nationalism today is, therefore, Palestine. A Jewish nationalist may be defined, quite simply, as a Jew who finds (or expects to find) life more full and meaningful for himself when he lives in the Jewish national Palestinian community than when he lives elsewhere. Such a person is a Zionist. Other Jews may, in fact, live in Palestine because they are not allowed to live elsewhere; they are not Zionists. Still other Jews do not themselves wish to live in Palestine but are associated with efforts to help less fortunate Jews make a home in Palestine. By a natural confusion of terminology, these helpers and sympathizers are sometimes called Zionists; in this study we shall refer to them as Zionist sympathizers, not as Zionists.

The Zionist program was stated with exceptional clarity by the late U.S. Supreme Court Justice Louis D. Brandeis in 1915:

> Zionism seeks to establish in Palestine, for such Jews as choose to go and remain there . . . a legally, secured home, where they may live together and lead a Jewish life, where they may expect ultimately to constitute a majority of the population, and may look forward to what we should call home rule. The Zionists seek to establish this home in Palestine because they are convinced that the undying longing of Jews for Palestine is a fact of deepest significance; that it is a manifestation in the struggle for existence by an ancient people which has established its right to live, a people whose three thousand years of civilization has produced a faith, culture and individuality which enable it to contribute largely in the future, as it has in the past, to the advance of civilization; and that it is not a right merely but a duty of the Jewish nationality to survive and develop. They believe that only in Palestine can Jewish life be fully protected from the forces of disintegration; that there alone can the Jewish spirit reach its full and natural development; and that by securing for those Jews who wish to settle there the opportunity to do so, not only those Jews, but all other Jews will be benefited, and that the long perplexing Jewish Problem will, at last, find solution.

Despite Justice Brandeis' eloquence, it must not be forgotten that —in terms of the definition adopted above—he was not a Zionist but only a Zionist sympathizer. Brandeis was not homeless. He was quite comfortable in his American home, dominated by a non-Jewish society.

Where Jewish nationalism has had its greatest hold has been in those countries where Jews felt themselves really homeless, scorned and rejected. Before the recent war and massacres, the greatest center of Jewish nationalism was the great Jewish Pale of eastern Europe, stretching through Poland, Lithuania, Latvia, White Russia, Ukraine, Galicia, Rumania and northern Hungary. Here Jews spoke their own language, Yiddish; they were universally regarded as second-class citizens; and they felt fortunate when they were not exposed to the more brutal forms of persecution. From 1880 to 1914 some two and a half million Jews left this area for the United States; a few hundred thousand migrated to the United Kingdom, South Africa, Canada, and South America; and some tens of thousands—primarily the wealthier and better educated—moved from eastern to central Europe.

Shortly after World War I, the major avenues of emigration from the Pale were closed. While the Jews of the U.S.S.R. were freed from organized anti-Semitism, elsewhere in the Pale anti-Semitism flourished. In Poland particularly anti-Semitism was intense, brutal, and governmentally-sponsored to an extent not exceeded till the later period of Nazi rule. There Jews felt themselves to be first, and before all else, Jews. Today the whole area which has suffered from Nazi occupation is touched by the same fire. It is in this area, above all, that Jews look to Palestine as a refuge from homelessness. Jewish national feeling has also been roused by extreme persecution in the Yemen; a comparable development may take place in other Oriental countries. These are, in addition to Palestine, the most vital centers of Jewish nationalism and realistic Zionism.

Most articulate and self-conscious, of course, is the national will-to-live of the Zionists now in Palestine. That can be broken only by force. During the war years, for the most part, Palestinian Zionism displayed great restraint. But it will not be reconciled to the White Paper policy of stopping immigration and putting an end to any major expansion in Jewish Palestine. Should such a policy be imposed by the Great Powers, it will undoubtedly be met by evasion and violence. Should Jewish violence be broken—and there is no question of the ability of the Great Powers to impose their policy, by a sufficiently ruthless use of force—it is possible that many Jews would leave Palestine. Prophecy is extremely difficult, but it seems that unless the Jewish National Home is allowed to expand substantially, it will contract. The present position is not a stable one.

Firmly arrayed against the eventuality of, in substance, giving up the attempt to establish a Jewish National Home, are the Zionist sympathizers of all countries. Such Zionist sympathizers can be distinguished from other people who are prepared to cooperate in establishing Jews in Palestine primarily by the fact that they do not regard Jewish nationality as, at best, an unfortunate necessity. They *welcome* the idea of Jewish nationality. They must not be confused with the Zionists who have a real current intention of becoming Palestinian settlers themselves. But these Zionist sympathizers are convinced of the desirability of opening Palestine to Jewish settlement, and they are prepared to make their views known to the Governments of the countries in which they live.

Such Zionist sympathizers were, in large part, responsible for the original enunciation of the Balfour Declaration by Great Britain and for the winning over of other democratic Governments to support of the same policy. They were responsible for bringing the Zionist issue so forcefully to the attention of both major American political parties as to secure (in 1944) their pledges of support for the freedom of Jews to migrate to Palestine, purchase land there, and eventually to make of Palestine a free and democratic Jewish Commonwealth.

In the perspective of world affairs, the voice of the Zionist sympathizers is perhaps the strongest and most effective voice of world Jewry—often stronger even than that of Zionist Palestine. The voice of the Zionist sympathizers is, moreover, not exclusively a Jewish voice. The idea of Jewish nationality has received profound intellectual support from so distinguished a Christian theologian as Reinhold Niebuhr and so eminent a secular philosopher as Bertrand Russell. It has a considerable following among men of good will in all democratic countries.

RECONSTRUCTION OR MIGRATION

The conviction of a large part of world Jewry that many more Jews will find it necessary and desirable to make their homes in Palestine derives, in part, from skepticism of the possibility of permanently re-establishing, from the Rhine to the Soviet frontier, the fragments of the once numerous Jewish populations still remaining alive there. This conviction is reinforced by the belief that the position of Jews in the Arab countries of the Middle East is at present unstable and may easily be pushed over the brink into catastrophe. It is further strengthened by the forecast that the Western democracies will not be willing to receive immigrants on a sizable scale. Even if these outward pressures and barriers did not exist, those who hold the Zionist philosophy would still desire Jews to go to Palestine; however, to the extent that they *do* exist, the degree of practical cooperation possible between Zionists and non-Zionists is enhanced.

So far as the outward pressures from Europe and the Arab Middle East are concerned, they will be examined—to the extent now possible—in Part IV of this study. These pressures are unquestionably very strong but difficult to assign exact magnitudes. The barriers to immigration into Western countries, on the other hand, present the Western democracies with a question of a different kind. It cannot, in candor, be said that this is primarily a problem of economic resources. There is no evidence, for instance, that the economy of the United States operates—even in quite short periods—under conditions of decreasing returns to additional increments of labor: therefore the acceptance by the United States of additional immigrants need result in no decline in per-capita income. Indeed, in countries like the United States and Canada, there is reason to believe that economies of scale (in transportation, social services, etc.) might well yield a higher per-capita income to a substantially larger labor force. There is, further, no question about the ability of the United States, for example, to equip immigrants with capital, unless an immigration of substantially over five million persons per year were under consideration. The new capital required to equip even five million immigrants, on the scale of the existing capital equipment of the American population, would be below $15,000,000,000. This is of the rough order of half the magnitude of America's annual capacity to save, under peacetime full employment.

A school of economic thought very influential in the United Kingdom and the United States, during the 1930's, laid great emphasis, in explaining the economic "stagnation" of those years, on the decline in the rate of population growth. Yet no member of that school suggested the obvious remedy—if a decline in population growth were indeed the reason for economic stagnation—namely, a sizable increase in immigration. For some part, this failure to recommend increased immigration was due to the political facts of unemployment when accompanied by the situation that the unemployed (and their betters!) were profoundly permeated by the philosophy of a constant amount of employment opportunity, which would not be expanded by the newcomers but would have to be shared with them. But for the larger part, the opposition to immigration in the Western democracies has been cultural and not economic. Cultural exclusiveness has masked itself in economic rationalizations.

In the nineteenth and early twentieth century heyday of migration, the immigrant was welcomed as an economic asset and a source of political strength. There might be prejudice against "foreigners", but foreigners were recognized to be needed. In times of economic crisis, local trade unions might suggest that the newly-arrived immigrant would be better returned to the country of his origin. But these disturbances were passing ones. In the main the immigrant was welcomed, until the sources of migration shifted towards southern and eastern Europe.

At the beginning of the twentieth century, there took place a profound loss of faith in the democratic way of life among all democratic peoples. Popular doctrine began to run in terms of the rising tide of the inferior races, which would engulf white democracy. Some European peoples also were singled out as being culturally unassimilable and having no capacity for democracy. In the United States, it was said that they could not be made into "good Americans". In other countries other words were used to signify the same conviction of cultural and political unassimilability. This loss of faith in the proselytizing power of democracy antedates the Great Depression. In the United States, its great landmarks are the Immigration Acts of the 1920's and the public discussion which preceded the adoption of those acts.

So long as this profound lack of faith in the educative power of democratic political and cultural achievements persists in the Western world, it is unwise to expect any substantial reduction in the barriers to immigration into Western countries. This is a question which challenges the capacity and conscience of Western democracy. It is perhaps the most fundamental challenge to democracy's belief in its own creative power. A strong, confident, growing society welcomes new members and is capable of finding a productive place for their talents. A weak, stagnant, fearful society cannot admit new members because it is afraid that they will not accept its way of life and because it can find no use for their efforts.

The closed doors of the Western democracies contribute greatly to the Jewish pressure for the abolition of political limitations on Jewish immigration into Palestine. But Jewish nationalists currently ask for far more than freedom of immigration. Like the Arab nationalists, they ask that henceforth their own fate be placed, in a greater degree, in their own hands. The Jews of Palestine are extremely bitter over their experience with Mandatory administration. The Mandate was launched with a clear, active policy directive in favor of the Jewish National Home. That directive was first interpreted in a passive, unsympathetic manner and then reversed in defiance of international obligations. From this experience comes the drive behind the idea of a Jewish State in Palestine. Palestinian Jews feel that their future is not safe except in the hands of their own people. They will accept international control, no matter how clearly committed in basic policy and no matter how adequately endowed with assurances of vigorous administration, only reluctantly —as a halfway house leading to their own self-governing commonwealth.

CHAPTER 9

ECONOMIC ANALYSIS AND THE FUTURE

POLITICAL UNCERTAINTIES

Some framework of general assumptions with respect to Palestine's political future is required as a basis for any attempt to outline her potentialities of economic development during the next decade. Yet no firm framework exists. The dominant articulate elements of both the Arab and Jewish peoples in Palestine aspire to sovereignty over the State. Britain has her own military and imperial interests in Palestine. At present, under such authority as the United Nations may exert, Britain's is the decisive voice. It is not yet clear what "postwar" adjustment these three lines of policy will receive, and it is not certain that the "postwar" adjustment will persist, without substantial alteration for as long as a decade.

The Palestine Arabs today demand that no further Jewish immigration into Palestine be allowed. They make this demand irrespective of the existence of opportunities for such immigration without any economic damage to themselves—and indeed in spite of the likelihood that such immigration would continue to bring them handsome economic gains. This Arab determination to exclude additional Jews from Palestine is maintained in the face of (a) the dire need of the Jewish people, (b) the historic connection of the Jews with Palestine, (c) the international pledges with respect to the Jewish national home, and (d) the existence of several undeveloped Arab countries that are free to exclude Jews from their territories if they please. In our judgment, from a general world view which attempts an equitable evaluation of the claims of both Arabs and Jews, the political aims of the Palestine Arabs—while not unintelligible—are extravagant and unreasonable.

The Palestine Jews, as represented authoritatively by the Jewish Agency for Palestine, demand that they be recognized immediately as the community primarily concerned with the further development of Palestine. Such recognition would involve nothing more than a clean-cut reaffirmation of the obligations of the Balfour Declaration and the Mandate. The Jews of Palestine demand further, however, that they be given sovereign control over immigration, land condemnation, taxation, and several other Government powers, so that they can have in their own hands the instruments needed for the energetic development of a Jewish Commonwealth.

This demand for Jewish sovereignty over the whole of Palestine is made in spite of the fact that the Arabs are still the majority of Palestine's population and in the face of Arab fears that Jewish control would mean (a) mass Jewish immigration without regard to the economic capacity of the country, (b) confiscation of Arab lands under the guise of condemnation for development purposes, and (c) tariff protection for Jewish industries at Arab cost. In our judgment, in view of the present gulf between the Arab and Jewish peoples and in view of the fact that the Jews are a minority in numbers, the claims of Palestine's Jews to immediate sovereignty over the whole of the country—while an intelligible reaction to the passive or unsympathetic administration from which they have suffered when sovereignty was in other hands—are precipitate and hence unreasonable.

Whatever be the equities of the matter, the conflict between the Arab and Jewish positions is so basic that a compromise agreed upon by the authorized representatives of both peoples is, at present, quite unattainable. The political future of Palestine will, for the present, have to be dictated by the United Nations.

Among the Great Powers there appears to be an inclination to accept a solution of Palestine's political future much nearer to that demanded by Zionism than to that demanded by Arab nationalism. Both of the great American political parties have publicly pledged their support for gradualist Zionism. The British Liberal Party has accepted a similar Zionist position and the British Labor Party a more radical Zionist one. Among British Conservatives, Mr. Winston Churchill is pledged to support a "moderate" Zionist position on immigration and land purchase. The Soviet Union, in so far as its views may be judged by the position of its Trade Union Delegation to the 1945 London International Labor Conference, is now also inclined to favor Zionism. For these reasons, we have felt that it is most valuable to base our analysis of the potentialities of economic development in Palestine during the next decade on the assumption that there will be no political limits on Jewish immigration or land purchase.

On the other hand, the gulf between the Arab and Jewish peoples in Palestine, at the present time, is so great that it seems unlikely that the United Nations will be ready to entrust one of them to the unfettered sovereignty of the other. Moreover, we place considerable weight on Britain's continuing military and other imperial interests in remaining in Palestine. For these reasons, we have judged it reasonable to assume that a measure of international control over Palestine will persist for some years. Such international control can be a great aid to economic progress or a great barrier. Maximum economic potentialities will be realized only if the international authority (Mandatory or Trustee) displays a new sense of responsibility, resourcefulness, and initiative in development work.

THE "LESSONS" OF HISTORY

There has been too much irresponsible generalization from history—and presumed history—in the discussion of Palestine's economic future. That Solomon mined copper in the Wadi Araba is no argument in favor of mining copper there today. Solomon did not have the alternative of purchasing his copper from Anaconda or Phelps-Dodge, Rhodesia or Chile. The Palestine of King David, Jesus Christ and Saladin may have had an agriculture of grain, sheep and goats. That does not mean that Palestine will not do better today with an agriculture of oranges, avocados, tomatoes, and lettuce.

Palestine may once have been heavily wooded. That does not constitute proof that afforestation of all her land unsuitable for agriculture would be a wise use of labor and capital today. It may be that scarce resources find more profitable employment in agriculture and industry and that it is wiser to trade part of the product of these activities for any necessary timber. The Negev and the Transjordanian highland may once have supported caravan cities. Modern means of transportation deny any unique position to the Palestinian land bridge between Africa and Asia. Motor roads can cut across the desert; ships can put in at several points along the eastern Mediterranean; planes can fly over Palestine without stopping.

The greatest service of a knowledge of Palestine's history is not to point the way to the future but to emancipate the mind from the idea of the dominance of tight limitations on the range of economic possibilities. Many things have been, and quite different ones can be in the future. Nature and history are permissive; they are not compulsive.

THE ANALOGY OF SMALL COUNTRIES

It is clear that Palestine cannot aspire to develop, in her scanty 10,429 square miles, an economy of the relatively self-sufficient, continental type that exists today only in the U.S.A. and the U.S.S.R. Her models, in so far as existing models are relevant, must be found rather at the other extreme of the size scale—in such countries as the Netherlands, Belgium, Switzerland, Uruguay and New Zealand. None of these countries owes its economic position to a mere imitative extraction of its resources. There has been the creative, energetic exploitation of resources. In that respect, their problems are the same as Palestine's. But also none of these countries is in the same resource or locational position as Palestine. These differences need emphasis.

The full character of the locational position of the Netherlands, Switzerland and Belgium is concealed, rather than made clear, by concentrating unduly on their being "small countries". In spite of trade barriers, their agriculture and industry are part of the large complex which includes the Rhineland, northern France, England and northern Italy. The presence or absence of coal or iron mines in the Netherlands or Switzerland or Belgium is of no more basic importance than their presence or absence in Michigan or Illinois. What is important, even in the case of bulky resources, is not to have them in one's own territory but to be near enough to suffer little competitive disadvantage due to transport costs. Places which have this disadvantage must find other industries in which bulky resources are unimportant. Swiss, Dutch, and Belgian firms normally do the same kind of intermediate fabrication, furnishing of parts, etc., for German firms as one part of the State of Michigan does for another part of the same State. The Dutch dairy industry feeds "local" English markets. Swiss tourist traffic is based overwhelmingly on services to persons who live within 24 hours' journey. Palestine industry, agriculture, and tourist traffic are confronted by quite different problems.

The immediate value of analogical reasoning between these European countries, on the one hand, and Palestine on the other is further reduced by consideration of the rate of their growth. Despite some reverses, there has been moderately continuous economic progress in the Netherlands, Belgium and Switzerland for at least eight centuries. Their industries have been established by trial and error, now leading and now following other neighboring countries. The Palestine problem that we are confronting is one of years, not of centuries.

Palestine has problems which these countries do not have. She has many advantages that they do not share; a sub-tropical sun, special soils, particular skills, Zionist zeal and an advantageous position for mediating between European civilization and the backward Middle East. She has special disadvantages: aridity and the consequent need for irrigation, distance from European markets, lack of capital, special need for rapid growth, and a heavy security burden resulting partly from political conflict and partly from the absence of a profound tradition of respect for life or property on the margins of the desert. Palestine is not Belgium or Switzerland or Holland. Comparisons with these small European countries darken counsel as often as they enlighten it.

No example much more directly relevant to Palestine's economic future can be found among the relatively small, younger non-European countries, Uruguay and New Zealand. To be sure, they are comparatively new countries, and they are more remote from the great world markets even than Palestine. Their exports have to carry high shipping costs. Their populations are also of the same order of magnitude as Palestine's. At the end of 1939, New Zealand had 1,642,000 people and Uruguay had 2,147,000. They are also like Palestine in having a high percentage of employment in agricultural (including pastoral) occupations.

With these points, however, the analogy ends. Uruguay and New Zealand are two of the most favorably situated countries in the world so far as natural pastures are concerned. They have the rainfall, temperatures and land. They have built their economies on these natural facts. Palestine has, by the standards of well-endowed pastoral countries, no natural pastures. Moreover Palestine cannot afford to use good land for extensive pasture. She must use it intensively to produce green fodder under irrigation. Uruguay is seven times the size of Palestine and New Zealand is ten times the size. They are not small countries by Palestinian standards.

Uruguay and New Zealand have the land to raise low-grade fodders for conversion into beef, veal, mutton, hides and wool. Palestine must concentrate on milk—from cows, goats, sheep, and camels—getting wool, hides, and meat only as byproducts. New Zealand, having natural pastures twelve months a year and progressive farmers, was able to attain in the 1930's the highest average per capita income of any country. She was fourth among world producers of wool, sixth in the world for milk, sixth for cheese, seventh for butter, and eighth for meat. Except for high-grade cheeses, Palestine cannot hope to export any of these products. New Zealand's main road is a blind alley for Palestine. But that is not necessarily a tragedy. There is no one road to prosperity. If Palestine will never export meat, neither will New Zealand ever export oranges. With irrigation and adaptation of her production of sub-tropical fruits and vegetables to European demands, Palestine's intensive agriculture may yet rival New Zealand's extensive one—but not in the same products or by the same methods. In any case, the highway of extensive agriculture which New Zealand is following will not satisfy Palestine's requirements for the absorption of additional population. From 1921 to 1939, New Zealand's population increased only from 1,272,000 to 1,642,000. Palestine's rate of increase was more than four times as great—and was yet but a small fraction of what Zionists hope to achieve during the next decade.

ECONOMIC REASONING AND THE FUTURE

It is our purpose to assay the possibilities of economic development in Palestine during the next decade. To that end, we shall first, in Part III of the present study, attempt to establish the character of the Palestinian economy today and some of the problems that it has encountered during the past quarter century. Then, in Part IV, we shall attempt to establish reasonable targets for economic achievement during the coming decade—on the basis of what can be projected with respect to skills, markets, capital, government initiative and other factors bearing on particular aspects of economic growth. We shall not attempt to *forecast* the future but shall try to establish an outline of what *might* be achieved under postulates which we regard as reasonable.

We are profoundly aware of the uncertainties inherent in any such enterprise. We cannot adopt any deterministic formula of growth or any simple extrapolation from past experience. We are acquainted with several studies that "prove" (generally on the basis of land area and water resources) that Palestine can "ultimately" support a population of 5,000,000 or 10,000,000 persons. We are not interested in confirming or denying such judgments. Since those judgments stipulate neither the standard of living at which the population is to be supported nor the economic processes by which that standard of living is to be earned, they have no meaning to us. As to what can be done "ultimately" in any country we know very little. Fortunately we also have no need to know.

Natural factors (land area, water resources, etc.) will not suffice to determine the magnitude of Palestine's economic growth during the next decade. These factors merely set limits and present possibilities. How far can man go, during a decade, in exploiting these possibilities? And not "man" in general, but these particular men—the human resources that Palestine will in fact have. It is self-evident that an Arab population of *x* hundred thousand, with its present skills, is incapable of creating an economic development in Palestine remotely approaching that which can be created by an equally numerous Jewish population. But how rapid a progress can a Jewish population reasonably be counted upon to create? And what can be done by a mixed population? We shall attempt to explore these problems in connection with particular economic activities, but we cannot presume to "demonstrate" the validity of our conclusions. We can, at best, only establish probabilities.

Innovation and uncertainty are the essence of progressive economic experience, and these make fools of even the wisest prophets. No more vain enterprise can engage the energies of an economist than an attempt to delineate an economic future about which no current decisions need be made. But if we are to make a machine, build a house, or lay a motor road, we must have some idea of the future. Otherwise we cannot act. If we are rational men, we will take account of the possibility of error: the machine may be rendered obsolete by tomorrow's invention, the house may be built in an area which later becomes a slum, the motor road may lie idle because of the competition of railroad or airplane. On the whole, the longer the period of any forward commitment, the greater the possibility of error. Yet, particularly in general political and economic affairs, it is impossible to avoid long-term commitments. Such commitments, it seems, must now be made with respect to Palestine. It is our purpose, in this study, to contribute to making those commitments as enlightened as possible. We are not attempting to predict the future. We cannot know whether Palestine will in fact be richer or poorer (or more or less densely populated) than our projections suggest. But we do know that the future will be more varied, more articulated, more multicolored than the best reasoned of our analyses.

PART III

PALESTINE TODAY

CHAPTER 10

THE LAND

MEDITERRANEAN BORDERLAND

Within her post-1922 boundaries, Palestine is a very small country. Her total area is 10,429 square miles, including 272 square miles of inland water. Palestine is about nine-tenths as large as Belgium and about four-fifths as large as the Netherlands. She is about 25 percent larger than the State of Massachusetts but little more than one-fifth as large as the State of New York. Transjordan, as separated from western Palestine in the partition of 1922 (34,700 square miles), is about three and one-half times as large as Palestine.

The latitude of Palestine (29°30′ to 33°15′ North) corresponds approximately to that of the Atlantic Coast of the United States from Charleston, South Carolina, to Jacksonville, Florida, or to that of the Pacific Coast south of San Diego, California, to Guadelupe Island, Mexico. Bermuda, Dallas (Texas), and Phoenix (Arizona) lie along the latitude which corresponds with that of Palestine's northern frontier. New Orleans (Louisiana) and Houston (Texas) are along the latitude which corresponds with that of Palestine's southern frontier.

In her post-1922 limits, Palestine is more distinctively a Mediterranean country than ever before. She has lost direct contact with the Arabian desert and with the interior highland east of the Jordan rift valley. Palestine now belongs to the borderlands of the Mediterranean in her climate, her semi-aridity, and her scantiness of lowlands. She belongs to the Mediterranean malaria area. Mediterranean too are her drainage, her irrigation and her terracing: the need for these traditionally underlies the difficulty of farming all around the great inland sea. Palestine is Mediterranean also in that agriculture, or more strictly horticulture—gardening and orchard growing, rather than farming as it is understood in North America—has traditionally been the economic basis of her life, as of all human life on the border of the Mediterranean.

Palestine's native diet is dominantly Mediterranean—bread, vegetables, olive oil, grapes, and other fruit, with only a moderate contribution of milk and meat—rather than the basically milk diet, rarely supplemented by meat, that characterizes the nomadic countries south and east of the Mediterranean borderlands. Palestinian native housing shows the characteristic Mediterranean alternation of baked mud and thatch with stone. The nomad's movable tent is rare—only less rare than the wooden house of more heavily forested regions. Like all other Mediterranean countries, Palestine is not specially well endowed with minerals, fish, or forests. Modern industry is a latecomer, and its basis hitherto has been primarily not local natural resources but local markets and special skills.

The following table and the map on the page opposite give the natural regions into which Palestine is divided.

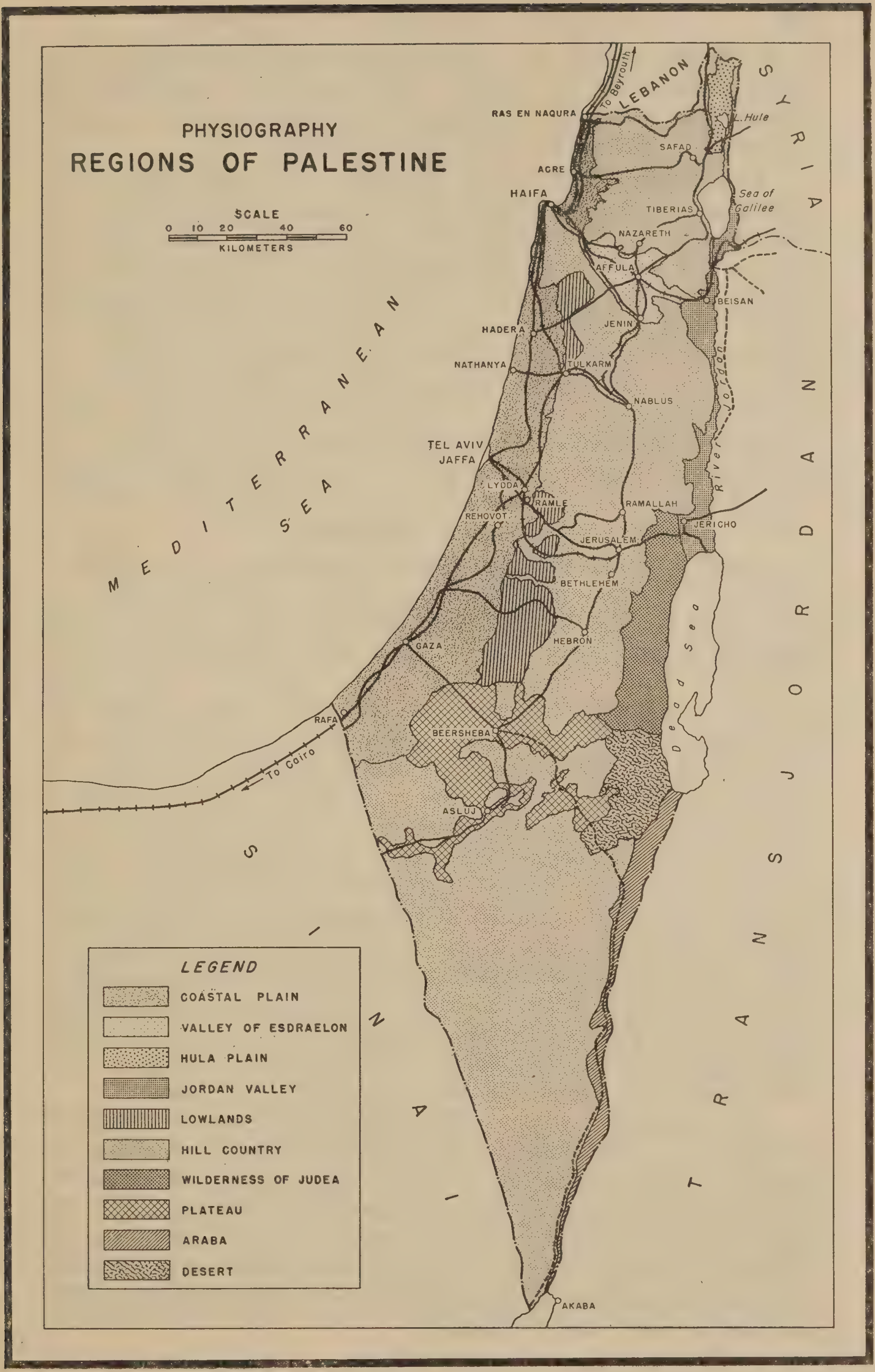
REGIONS OF PALESTINE

	In square kilometers	*In square miles*	*In % of total area*
Coastal plain	3,160	1,220	....
Esdraelon plain	489	189	....
Hula plain	190	73	....
Jordan valley	628	242	....
TOTAL PLAINS	4,466	1,724	16.5
Hills north of Esdraelon	2,072	800	....
Hills south of Esdraelon	7,523	2,904	....
Hills east of Jordan	29	11	....
TOTAL HILLS	9,624	3,715	35.6
Coastal area	709	274	....
Plateau	2,665	1,029	....
Hills and desert	8,029	3,099	....
Araba	812	313	....
TOTAL NEGEB	12,215	4,715	45.2
Lake Hula (Waters of Meiron)	14	5	....
Lake Tiberias (Sea of Galilee)	165	64	....
Dead Sea (the half in Pal.)	525	203	....
TOTAL WATERS	704	272	2.6
TOTAL AREA	27,009	10,429	100.0

Source: Adapted from regional classifications, based on both soil and elevation, made by J. Lifschitz and J. Weitz of the Jewish National Fund. Full data in unpublished studies of the J. N. F., Jerusalem; summary used in J. Weitz, *Palestine's Potentialities*, Jerusalem, 1944 (in Hebrew; English edition forthcoming). Subtotals in this and all other tables will not necessarily add exactly to totals, due to rounding.

BOUNDARIES

The present boundaries of Palestine (see the end-paper maps) were established in more than seven years (1916-1923) of tangled and often embittered negotiations. The chief protagonists were Britain, France, Zionism, and Arab nationalism. There were no major controversies concerning the boundaries on the west


PHYSIOGRAPHY
REGIONS OF PALESTINE
SCALE
0 10 20 40 60
KILOMETERS
MEDITERRANEAN SEA
LEBANON
To Beyrouth
SYRIA
TRANSJORDAN
SINAI
RAS EN NAQURA
ACRE
HAIFA
SAFAD
L. Hule
TIBERIAS
Sea of Galilee
NAZARETH
AFFULA
BEISAN
JENIN
HADERA
NATHANYA
TULKARM
NABLUS
Jordan River
TEL AVIV
JAFFA
LYDDA
RAMLE
REHOVOT
RAMALLAH
JERICHO
JERUSALEM
BETHLEHEM
HEBRON
Dead Sea
GAZA
RAFA
To Cairo
BEERSHEBA
ASLUJ
AKABA
LEGEND
COASTAL PLAIN
VALLEY OF ESDRAELON
HULA PLAIN
JORDAN VALLEY
LOWLANDS
HILL COUNTRY
WILDERNESS OF JUDEA
PLATEAU
ARABA
DESERT

or the south. On the west, the boundary was established at the Mediterranean. On the south, it was fixed by a surveyor's line running east of the Sinai peninsula from near Rafa on the Mediterranean to the Gulf of Akaba on the Red Sea.

The northern frontier of Palestine and Transjordan, with Syria and Lebanon, was fixed—in principle—before Transjordan was given a separate status. This joint frontier runs from Iraq south of the Jebel Druz and then south of the Yarmuk valley to a point where the Yarmuk is approximately four miles from the Sea of Galilee. There the frontier crosses to the northern side of the Yarmuk and runs east of the Sea of Galilee, so as to leave the whole of the Sea (and its eastern shore) outside of Syria. The frontier continues north on the east side of the Jordan valley and east of Lake Hula, so as to leave these both also entirely outside of Syria. It passes east of the Hula marshes to Banias (Dan). There it turns first west and later again sharply north to Metulla. This is the northernmost point in Palestine.

About halfway between Banias and Metulla, the Palestine border loses contact with Syria and begins to front on the Lebanon. Above Metulla the Palestine frontier is less than two miles from the Litani River. The frontier does not, however, follow the Litani west to the Mediterranean. Instead it drops south sharply for about twelve miles and then turns west, reaching the sea at the Ladder of Tyre (Ras en Naqura). In view of the potential value of the Litani waters for the irrigation of Palestine, the Zionists pressed for the inclusion of at least one of its banks in their country. They argued that only a small fraction of the stream's water was needed or could be used in the Lebanon, while the water was badly needed in Palestine. France, however, was unwilling to draw the frontier of the Lebanon in a way that would assure Palestinian access to the stream—except in exchange for other concessions which Britain was unprepared to offer. All that could be secured as a guarantee for the rational use of the water resources was a vague French commitment to participate in the reexamination of the possibilities of using the water to the mutual advantage of the peoples on both sides of the frontier.

The Palestine frontier with Transjordan runs from east of El Hamma a few miles to the south and west, reaching the Jordan below its confluence with the Yarmuk and below the Tel Or hydroelectric station. In this area, about ten miles of the course of the Yarmuk and both banks of the Jordan are in Palestine. Then the frontier runs down the center of the Jordan, the Dead Sea and the Wadi Araba to the Gulf of Akaba (passing just west of the town of Akaba).

As the text of the present Mandate for Palestine shows, in the discussions of 1917-21 the name Palestine was used to cover the lands both east and west of the Jordan. But in the Middle East settlement concluded in 1921-22, when Mr. Winston Churchill was Colonial Minister, there was a shift. In August 1921 the British Government issued a revised draft mandate for Palestine, embodying this redefinition of policy. Adopted by the Council of the League of Nations in September 1922, this revised draft contained a new article permitting the mandate provisions with respect to the Jewish National Home to be postponed or withheld in the area "between the Jordan and the eastern boundary of Palestine". The head of the mandatory administration in Palestine continued as the head of the administration of Transjordan. The two areas remained a single customs and currency unit. They were divided only by the authority of the Emir of Transjordan and by the provisions relating to Jewish settlement.

STRUCTURE AND RELIEF

From a geological point of view, Palestine is a young country. Its important strata represent approximately the last eight percent of geological time. The basic rocks were laid down originally as horizontal limestone layers, to a depth of perhaps 3,000 feet.

The original horizontal position of the sediments can still be seen at some places in Palestine, but—in contrast with Transjordan—such an even horizontal distribution is no longer common. Most of the surface has shifted vertically. Major east-west and southwest-northeast breaks have occurred. The greatest uplift took place in a north-south direction, from the high Syrian plateau south through the Red Sea into East Africa. Here, along parallel splits, the middle piece sank in a strip of varying width, forming in Palestine the broad and deep trough of the Jordan Depression. This split falls in Palestine to the deepest depression on earth, about 1,286 feet below sea level. In recent geological time the waters of the Jordan Depression have had no outlet, except through evaporation. They have therefore become saline and created the great salt water body of the Dead Sea.

Simultaneous with the formation of the Jordan Rift, an analogous event took place on the western side of Palestine. Strips of land sank in staircase-like fashion. The most western ones sank below the surface of the sea. Cross-rifts also took part in shaping the face of the land. The largest of such cross-rifts resulted in the trough formation of the valley of Esdraelon and Jezreel. Other smaller troughs were created by the same process in Samaria and lower Galilee. A similar rift divides the Judean Hills from the Negeb. Large volcanic areas in Galilee are relics of the great eruptions which created the present relief.

The movements shaping the structure of Palestine have not yet come to a standstill. The latest earthquake took place in 1927, causing about 500 deaths and considerable property damage. Palestine is an earthquake zone, though not as markedly one as Calabria or the Pacific coast of North and South America.

In addition to these basic geological forces, the face of Palestine has been shaped by the action of wind and water and the work of man and beast. The waves of the Mediterranean, sweeping in from the west, have deposited sand along the shore, which—borne inland by the prevailing westerly winds—have created coastal sand dunes, to a maximum depth of about five miles. In the Negeb, winds coming from the east have deposited a valuable sandy loess soil. Borings in the Wadi Gaza show that there the loess, about three meters deep, lies on river gravel containing Egyptian objects of about 4,000 years ago. The loess layer seems to be increasing.

In other places, however, water and wind have denuded hillsides of their soil. Man has taken a hand in the process of soil destruction by cutting down the trees that would otherwise hold the rain waters from flowing in torrents. The camel, the sheep, and—most importantly—the goat have added to the work of destruction. The goat is the greatest destroyer. He eats shrubs, bushes, and even trees: where he is allowed to roam freely, no tree can get a start. In time, he can change the whole relief of the land.

The effect of these forces of geology, climate, man and beast has been to form a land predominantly mountainous and very much broken up into small sub-regions, with distinctive characteristics of soil, climate, water and human adaptation. The differences of climate, in particular, that occur over very short distances are constant sources of amazement to travelers from other countries where such sharp differences occur only over much greater distances. In Palestine it is possible to drive in two hours from the seashore of Tel Aviv up to the hill summits of Jerusalem and then down to the level of the Dead Sea—three worlds.

TEMPERATURE AND WINDS

Palestine is a country of two well-demarcated seasons. The summers, from May to October, are entirely without rainfall and hot—but no warmer than the hottest parts of the United States. The winters, November to April, are mild with heavy rainfall.

The following table compares the temperatures of five cities and towns in Palestine with those of five United States cities in comparable latitudes.

MEAN TEMPERATURES AND VARIATIONS, PALESTINE AND U. S. A.

	Mean for year *F.°*	*Mean maximum of hottest month* *F.°*	*Mean minimum of coldest month* *F.°*
Haifa	70	85	48
Tel Aviv	69	90	48
Jerusalem	64	85	39
Jericho	73	103	49
Beersheba	67	92	41
Charleston	66	88	43
San Diego	61	74	47
Jacksonville	69	90	47
New Orleans	70	90	47
Austin	68	93	40

Sources: For Palestine, Government of Palestine, *Statistical Abstract of Palestine*, Jerusalem, annual; hereafter cited as *Statistical Abstract*. For the United States, U. S. Weather Bureau, Washington, D. C.

So far as mean yearly temperatures are concerned, the Palestine and U.S. stations are almost identical. The mean Palestinian city is Tel Aviv with 69°, and the mean American one is Austin with 68°. San Diego is the lowest of the ten with 61° and Jericho the highest with 73°.

It is clear that, of the ten stations compared in the table above, Jericho is the most tropical. It must not be thought, however, that such hot weather as that of the Jordan Valley is not to be found in the United States—and in very similar latitudes. If we go to Brawley, in the Imperial Valley of California, or to Yuma, Arizona, we shall find greater heat than in the Jordan Valley as well as serious frosts, from which the Jordan Valley is entirely free.

COMPARATIVE SUB-TROPICAL TEMPERATURES, PALESTINE AND U. S. A.

	Mean for year *F.°*	*Mean maximum of hottest month* *F.°*	*Mean minimum of coldest month* *F.°*
Jericho	73	103	49
Yuma	72	105	42
Brawley	71	106	36

Sources: *Statistical Abstract* and U. S. Weather Bureau, Washington, D. C.

The similarity of the averages is, in some respects, deceptive. As soon as we go beneath them to the individual facts, the superior climate of Jericho—from an agricultural point of view—is striking. Over a forty year period, Yuma had frosts for an average of 17 days. Brawley had frosts for an average of 62 days. At Jericho, frost is almost unknown. (Moreover, over a forty year period, Jericho averaged 6.1 inches of rain, while Yuma had only 3.6 inches and Brawley only 2.4 inches.) The narrower range of Palestine's temperatures is very important.

The comparative stability of Palestinian temperatures derives largely from the alternation of wind currents. In the summer, the air pressure minimum lies east of Palestine because of the great heat that develops in the desert. Winds come chiefly from the northwest and west. They bring moist and relatively cool air. In the winter, the air pressure minimum is in the western Mediterranean but extends as far as the Syrian coast. Winds arise chiefly from the east and southeast in northern Palestine, and from a more westerly direction in southern Palestine.

During the seasonal transitions, and also in the winter, the east wind comes from the desert carrying penetrating cold or scorching heat. The cold is great enough to create severe discomfort in poorly constructed and insufficiently or entirely unheated houses. But in most of the country snow never falls, and even frost is rare. The hot desert winds are more serious. They are the feared "chamsins". The chamsin may blow about ten days in each of the months of March, April and May, reducing the working capacity of man and beast and frequently doing severe harm to crops. September and October also sometimes have days when the chamsin blows. The winds are so dry that humidity falls to zero. The atmosphere appears hazy. Everything is covered with a fine desert sand.

RAINFALL AND ARIDITY

Shortage of water is the most important present natural limitation on both the extension and the intensification of Palestinian agriculture. It is also an important limitation on the development of many industrial enterprises. About half of the total land area of the country lies within the 200 millimeter (8 inch) rainfall line. That half of the country receives a total of about 7 billion cubic meters of rainfall, or an average of over 500 millimeters (20 inches). Jerusalem (with 663 mm.) receives substantially more rain than London (615 mm.), Paris (576 mm.), Berlin (577 mm.), Warsaw (475 mm.), or Odessa (392 mm.). Palestine outside of the Negeb receives more rainfall than some of the great cereal producing areas of the world. However, the benefits of the rainfall are reduced by its poor distribution in time, predictability, and area.

Some idea of the unpredictability of the rainfall can be gathered from the following table.

VARIATIONS IN ANNUAL RAINFALL OF PALESTINE

	Average annual rainfall, 1901-1940 millimeters	*Highest annual rainfall, 1926-7—1941-2 millimeters*	*Lowest annual rainfall, 1926-7—1941-2 millimeters*
Haifa	635	807	333
Tel Aviv	550	880	316
Nablus	632	1,024	339
Jericho	152	206	62
Beersheba	220	336	130

Source: *Statistical Abstract.* 1,000 millimeters = 39.36 inches.

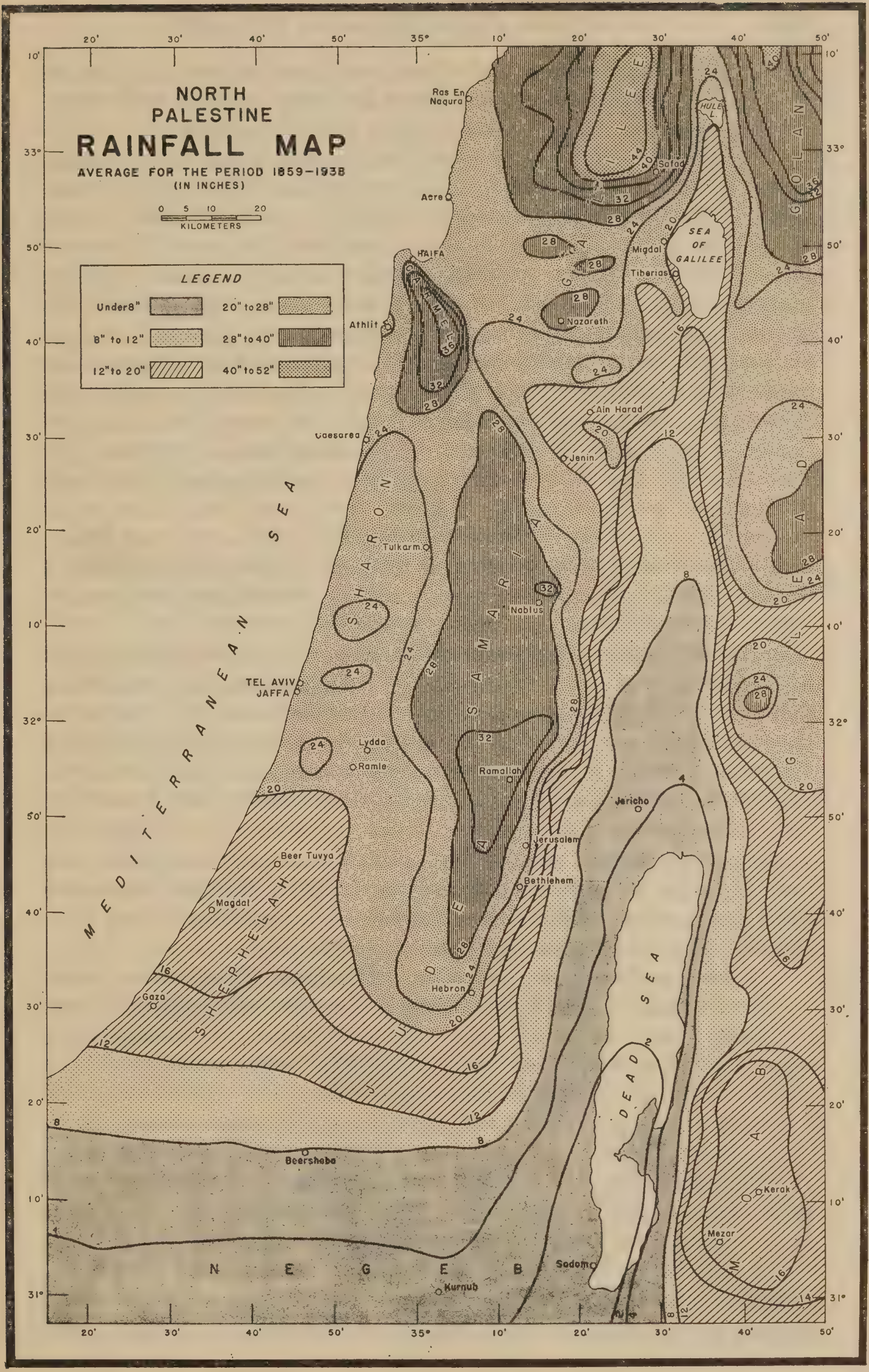
In the wettest years, out of the fifteen chosen to examine the magnitude of annual variations, total rainfall at these stations was of the order of three times the amount of rainfall in the driest years. Such large variations are very disturbing to agriculture, particularly where cheap irrigation is unavailable. Exceptionally dry years are most damaging, but exceptionally heavy rainfall also is not an unmixed blessing, especially if it comes at the wrong times. We were in a position to see the damage done by the exceptionally heavy precipitation in the winter of 1944-45, when much land was flooded, seeds in the ground rotted, and heavy rains from December through February interfered seriously with planting and re-planting.

The rainy season in Palestine is divided into the so-called "early rains" and "late rains". The former come from October to January, the latter in February, March and April. The heaviest concentration of rainfall is in December and January. On the average, during the forty years 1901-40, between 45 and 50 percent of the total annual rainfall fell during these two months. About 20 percent of the total fell during February, leaving only 30 to 35 percent for the remaining nine months of the year. The length of the season during which some rain falls varies from year to year by as much as two or three months. A single late rain may be decisive in turning a mediocre into a successful crop. This pattern of distribution of rainfall over the year is similar to that of the whole Mediterranean region. It also bears a striking resemblance to that of the Los Angeles area of the United States. The average rainfall in Los Angeles, however, is only about 16 inches (400 millimeters) a year. Latitude for latitude, the Lebanon and Palestine coasts receive twice as much rain as the California coast.

In general (as is shown by the rainfall map facing page 110), rainfall declines in Palestine from the north to the south of the country and from west to east. Within this broad framework, determined by the origin of the rain-bearing winds and their contact with the cold air from the north, the hill country receives much more rain than neighboring lowlands. Metulla, the northernmost station in the country, has 912 millimeters (36 inches) of rain, while Beersheba in the south has only about 220 millimeters (8.8 inches). The hills of the Carmel, south and east of Haifa, at elevations from 300 meters to 500 meters, have a rainfall from 700 millimeters to 900 millimeters, while the hills about 45 miles due east of them in Transjordan at the same elevations have a rainfall of only 500 to 600 millimeters. From Safad to Capernaum is a distance of only about 7 miles, as the crow flies, but there is a drop in elevation from 834 meters above sea level to 206 meters below sea level. This drop of 1,040 meters (3,411 feet) means a decline in rainfall from over 900 millimeters (36 inches) to less than 500 millimeters (20 inches). The same variation of precipitation with altitude is found all over Palestine. The hills on which most of the rain falls are frequently too rocky or too sloping for optimum cultivation.

Palestinian precipitation is badly distributed not only from year to year, within the year, and by areas, but also over quite short time periods. A large share of the monthly precipitation may take place on one day, or even in a few hours—just as in southern California. Rains frequently resemble cloudbursts and are driven by strong winds. In the hill country, denuded of trees and stripped of vegetation by goats, the water pours down to the valleys in torrents, carrying valuable soil from the hillsides to lower shelves or to the floor of the valleys. A single heavy rain may cut deep gullies and shift the beds of local wadis (normally dry watercourses). The drainage of Palestine is too local for most of the soil to be carried very far. The turbulent wadi quickly loses its water through evaporation or percolation into the soil. The silt content is, for the most part, deposited locally and not carried out to sea. Yet this erosion is very destructive since it carries soil from places where it is already thin, and hence vital, to other places where it is less needed or entirely useless.

An important compensation for the maldistribution and violence of the rainfall is the relatively large amount of dew. Dew is known all over Palestine, but it is especially great in the coastal plain, on the western slopes of the hills, in the Valley of Esdraelon and in the Negeb. So deeply ingrained is the idea of the importance of Palestinian dew in Jewish consciousness that orthodox Jews, most of whose ancestors have not lived in Palestine for nearly 1900 years, still add to their regular prayer service a special prayer for dew at the season when it is most needed in Palestine. Dew is often sufficient to permit the growth of crops without irrigation even in a relatively dry subsoil. Dr. D. Ashbel, the most distinguished authority on Palestinian rainfall, has concluded that, in some parts of the Negeb, "the quantity of water obtained from the dew exceeds that made available from rainfall. A careful study has revealed that


NORTH PALESTINE
RAINFALL MAP
AVERAGE FOR THE PERIOD 1859–1938
(IN INCHES)
0 5 10 20
KILOMETERS
LEGEND
Under 8"
8" to 12"
12" to 20"
20" to 28"
28" to 40"
40" to 52"
MEDITERRANEAN SEA
Ras En Naqura
Acre
HAIFA
CARMEL
Athlit
Caesarea
Tulkarm
TEL AVIV
JAFFA
Lydda
Ramle
Beer Tuvya
Magdal
Gaza
Beersheba
Kurnub
Sodom
Hebron
Bethlehem
Jerusalem
Ramallah
Nablus
Jenin
Ain Harad
Nazareth
Tiberias
Migdal
Safad
HULE L.
SEA OF GALILEE
GALILEE
GOLAN
GILEAD
MOAB
Kerak
Mezar
Jericho
DEAD SEA
SHARON
SAMARIA
JUDEA
SHEPHELAH
NEGEB
20' 30' 40' 50' 35° 10' 20' 30' 40' 50'
10' 33° 50' 40' 30' 20' 10' 32° 50' 40' 30' 20' 10' 31°
2 4 8 12 14 16 20 24 28 32 36 40 44

over 200 millimeters of water has been precipitated by dew on plants. This explains how such corps as durra (millet) and watermelons can grow in the Negeb during the dry season."

Where rain and dew are insufficient, they can often be supplemented by irrigation. But not all the rain that falls is recoverable. Some is caught by the vegetation, held for a time, and then evaporated back ("transpired") to the atmosphere. Between 75 percent and 90 percent of the growing portion (not the woody part) of plants consists of water. Of the precipitation that reaches the ground, some evaporates from the surface, some "runs off" over the surface and some "percolates" into the ground. Evaporation is increased by heat and dryness. Percolation is favored by a porous soil structure, a warm soil, and good vegetative cover. In the United States, a run-off of 30 percent may be regarded as "normal". In Palestine, the few studies that have been made suggest that evaporation and percolation are so great that run-off may often be as low as 10 percent. This situation diminishes the amount of irrigation water that can be recovered through impounding or tapping the run-off, but it increases the amount recoverable by tapping the water that percolates into underground water bodies.

Not all of the initial percolation, however, filters down into the underground water bodies. Some of it is absorbed by vegetation and transpired into the atmosphere. Some re-ascends by the capillary action of the soil and also passes back into the atmosphere. The role of soil cover in these processes is a complicated one. Cover prevents rapid run-off, erosion, and flash-floods. But it also increases evaporation through vegetation. It reduces percolation into underground water bodies by using up water in plant growth and transpiration. At best, the diminution of aridity through increasing soil cover (principally planting forests) is an extremely long-term project. The current remedy must be irrigation.

There are two basic irrigation techniques. The first is to impound the "run-off" waters in dams and reservoirs, to divert them by gravity flow, or to lift them out of streams. The second is to raise the "percolation" water by tapping springs, sinking wells, or putting down boreholes. At the present time, the second technique is responsible for almost all of Palestine's irrigation—particularly in the great agricultural areas of the coastal plain and the Valley of Esdraelon. Irrigation from surface streams is important only along the Jordan and its sources. The first modern experiment with damming up a wadi has just been made in the Negeb at Asluj.

In all these matters of temperature, rainfall and irrigation, Palestine's position is remarkably similar to that of the western portion of the Pacific Coast States of Washington, Oregon, and

California, located in what the U. S. Department of Agriculture calls the "summer-dry climates". A statement on this prosperous United States agricultural region, published by the Department in 1941, reads like a statement on Palestine, with some differences and perhaps some anticipations of the future: "Today agriculture in the summer-dry region is based on the natural advantage of mild winters and a long growing season. Citrus fruits, the less hardy deciduous fruits, fresh vegetables in winter—these are grown for distant markets . . . Irrigation does not have quite the same function it has in truly arid regions; it is supplementary to the winter precipitation and is often provided by pumping directly out of the ground on individual farms. Winter run-off has gone mostly unused to the sea . . . . The intensity of agriculture in the region as a whole depends almost entirely on how extensive are the means for overcoming summer drought."

MINERALS AND STONE

Palestine cannot be said to be well endowed with minerals known and exploitable today. Her one rich mineral source is the Dead Sea. The late Government Geologist of Palestine, George Blake, summarized the situation adequately by saying that, since Palestine is geologically a new country, "metallic minerals of economic value are unknown, and coal probably does not exist." Nevertheless, he added, "The country possesses an average of mineral wealth and, in a sense, has unique resources, for the occurrence of potash and bromine in the Dead Sea is without parallel elsewhere on earth."

The Dead Sea waters have a volume of about 159 cubic kilometers (about 38 cubic miles). They contain a very large quantity of mineral salts. An analysis of the brine at various depths showed a salt concentration about six times that of the ocean. The concentration of commercially valuable salts is even greater. The most important of these are shown in the following table.

ESTIMATED QUANTITY OF PRINCIPAL DEAD SEA SALTS

(in millions of metric tons)

Potassium Chloride		2,000
Sodium Chloride		11,900
Calcium Chloride		6,000
Magnesium Chloride		22,000
Magnesium Bromide		98,000
Magnesium content	5,900	
Bromine content	850	

Source: Unpublished paper by Dr. E. Bergmann, *The Dead Sea and its Surroundings.*

Although Palestine's total potassium resources are only about one-fifth those estimated to exist in Germany, production of potash is easier in the Dead Sea than elsewhere. Whereas other potash-producing countries require steam for refining, in Palestine the hot sun shines over the drying pans evaporating the sea water through about nine months of the year. There is sufficient potassium in the Dead Sea to supply the needs of the world at present consumption rates for a thousand years.

The bromine concentration in the Dead Sea, which is about one hundred times as great as in the ocean, gives Palestine a very large commercially exploitable source of bromine. Even Germany, which has very rich deposits, possesses only about one-seventh of the total quantity of bromine to be found in the Dead Sea.

The Dead Sea water has a magnesium content eight to nine times higher than that of ocean water. Yet only very small amounts of magnesium chloride have been produced from these magnesium salts. High power costs, lack of technical knowledge, and lack of markets have hitherto prevented any production of magnesium metal. The remaining minerals of the Dead Sea, outside of common salt, which is available in large quantities elsewhere in Palestine, are now of no commercial importance.

Beyond the Dead Sea, mineral deposits in Palestine are of minor commercial value. Although the geological structure of the country suggests the possible existence of petroleum in economic quantities, none has been found yet. A small source of natural gas was found at Sakid, 6 miles from Jaffa, at 155 meters depth. Asphalt has been mined since oldest times on the shores of the Dead Sea and also at Wadi Mojib, En Gedi, and Massada, but it is now available more cheaply from imports or as a by-product of petroleum refining. About 24 million tons of bituminous limestone, which produce upon distillation up to 11 percent of shale oil, are estimated to be available in the Desert of Judea; this deposit has no commercial value at the present time.

Phosphates are found, especially on the eastern slopes of the Judean hills. The phosphates are not very concentrated (about 30 percent to 55 percent of tricalciumphosphate content). Salt is mined at Djebel Usdum, the Rock of Sodom, at the south end of the Dead Sea, where it can be mined above the ground without refining. The major Palestinian source of salt is the sea water evaporated at Athlit, south of Haifa. Gypsum is found all over Palestine. The most important deposit, that near Menahemiya, is being exploited by the Jewish colony.

Sulphur deposits of unknown magnitude have been exploited near Gaza. Associated with the sulphur deposits, alum is found.

Some copper, some chromium, small amounts of vanadium, and considerable quantities of manganese are found in the south of the country, but not in commercial quantities.

Palestine is well endowed with sands suitable for cement making; she has some sand suitable for glass making; and she is well supplied with building stone. Limestone predominates, but there is some basalt, particularly in Galilee, and there is some marble. The stones are called by local names. Perhaps the most common building stone is Meleke, a kind of marble present in large amounts in the subsoil of Jerusalem and also in many other places. So long as it is not brought up to the light, it is soft and workable and can easily be cut into smooth stones. Later it hardens. Its color varies from silver white to red—yellow and reddish tints being most common. These colors, under clear skies and a brilliant sun, give their characteristic aspect to Jerusalem today.

FORESTS

Palestine today contains no trees worth cutting by the commercial forestry standards of the United States. Pine forests grew a century ago on at least part of the land south of Jaffa that is now covered by moving sand dunes. From Jaffa to the Carmel, large forests of oak have disappeared during the past century. On the Carmel, pine and oak forests have been almost entirely destroyed during the last three decades. (It is revealing of the treeless character of the land that, in this area, a progressive new settlement takes its name from the proud fact that it possesses a few small oaks. The houses of the settlement are built among the trees, without damaging a single one.) The area south and west of Hebron, carelessly labeled as desert by uninformed observers, bore a large oak forest until recent years.

The process of forest destruction carried on under Turkish rule and during the war of 1914-18 has continued under the Mandate. The forests of Samaria have been finally ruined only during the past decade. The scrub forests of Galilee (and some big trees) are being destroyed right now. In the winter of 1944-45 in Palestine we were told of several cases in Galilee where Arabs had cut down all the trees on unfenced and unguarded land when the land was declared Government-owned forest after land settlement.

The enemies of the forest are uncontrolled grazing and uncontrolled wood-cutting. The goat and the charcoal burner cooperate. The goat denudes the hillsides, eating shrubs and undergrowth, and grubbing up their roots. The charcoal burner cuts down young trees and even strips the dunes of their vegetation. Once the goat and the charcoal burner have removed the forest undergrowth, the natural regeneration of the forest is impossible. The land denuded of vegetative cover begins to erode. In areas of fast-moving water or wind, the erosion can reach the sheet rock in a very short time. Fortunately, in Palestine, much of the overgrazed and overcut land still contains pockets of soil in the porous limestone. Trees can be planted in these pockets, and—if the forest is protected—the soil cover may be restored over several generations of tree growth. Even if the process of soil restoration never yields valuable agricultural land, the forest—under control—can provide some wood, animal feedstuffs, and assistance in preventing erosion by wind and water.

Most of this constructive afforestation is, however, for the future. In Palestine on March 31, 1944 there were only about 25.8 square kilometers (10.0 square miles) of privately afforested land and about 30 square kilometers (11.6 square miles) of Government afforested land. The total artificially afforested area was, therefore, equal to about two-tenths of one percent of the total area of the country. Some 751.5 square kilometers (290.3 square miles) had been "gazetted" as forest reserves, but this act had little significance since lands so classified were not even protected from further forest destruction. In recent years the Government of Palestine has been planting about 800,000 trees per year; this is enough, at its planting density of about 150 per dunum,* to cover about 5.3 square kilometers (2.0 square miles). Private people (notably the Jewish National Fund) have been planting about 600,000 trees per year; at their more dense planting ratios of about 300 per dunum, this provides forest cover for about 2.0 square kilometers (0.77 square miles). It is possible that the rate of new planting now is greater than the rate of scrub forest destruction, but at this rate of planting little net progress is being made. The area of land suitable for afforestation is variously estimated as between 1,500 square kilometers (by G. N. Sale, Government Conservator of Forests) and 3,000 square kilometers (by J. Weitz, of the Jewish National Fund). Even assuming that the present planting represents *100 percent* net addition, it would take over 200 years, at the present rate of tree planting, to reach the lower of these two afforestation targets.

The greatest accomplishment in conserving the soil of the hill country by planting trees, under the Mandate, must be credited to the Arab farmer and his plantations of olives, vines, and other hill fruits. In 1922 there were only about 120,000 dunums of land in

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* A dunum is equal to 0.247 acres; 1,000 dunums equal one square kilometer or 0.386 square miles.

Palestine planted with olives; in 1944 there were over 600,000 (99 percent Arab). In many cases, the areas listed as planted contain only a few trees, but even these make a contribution to erosion control. Nearly 400,000 dunums more, under grapes, figs, and other fruits grown largely in the hills, make a similar contribution.

FISH

The natural fish resources of Palestine are still incompletely known. The Mediterranean (which now accounts for over 80 percent of Palestine's fish catch, apart from the fish produced in artificial ponds) is not an especially rich fishing ground. All of the great sea fishing countries of the world have access to cold northern waters. The six countries which in prewar years were the most important in sea fisheries were, in the order of the size of their catch, Japan, Korea, U.S.A., U.S.S.R., Norway, and the United Kingdom. The least of these temperate and cold water sea fishing countries took from the sea, in 1938, over 1 million metric tons of fish. In contrast, Greece, the great fishing country of the eastern Mediterranean, had a sea catch of only 17,400 metric tons. Palestine, at her peak (in 1944), had only 2,814 metric tons. These small catches reflect the comparatively meager endowment of the Mediterranean.

Lake fish landed in Palestine accounts for about one-quarter as great a total as sea fish. With careful stocking of Lake Tiberias (the Sea of Galilee) and conservative fishing practice, this total is susceptible of some increase. The unexplored area, however, is the Gulf of Akaba. Popular report in Palestine has it that the Gulf is very rich in fish, having been exploited only to a trivial extent by the local Arab fishermen. These local fishermen lack both the resources and the enterprise to solve the problems of transporting the fish rapidly, in a fresh state, to central and northern Palestine or preserving it in a form suitable for export to more distant markets. The war resulted in an improvement in the roads leading to Akaba, but—through the requisitioning of ships and the limitation of freedom of movement—it prevented further exploration. The total fish resources available are, therefore, still unknown.

THE MAJOR PLAINS

The major plains of Palestine are the most important regions of the country, from an economic point of view, but they cover only one-sixth of the total area. (See table on page 102.)

Coastal Plains

The coastal plain, from Ras-en-Naqura on the north to the

Wadi Gaza on the south, is about 118 miles (190 kilometers) long. It begins at the northern frontier, where the Galilean mountains reach the sea in a promontory that forms the Ladder of Tyre. At Acre the plain is about 5 miles wide. South of Haifa the mountain block of the Carmel comes within 200 yards of the sea and effaces the plain. For about 12 miles south of Haifa, the coastal plain is less than 3 miles wide. Then it broadens rapidly. From Natania east to Tulkarm, it is 11 miles wide. From the sea at Gaza to below Bir Abu Mansur, it is over 19 miles wide.

With the exception of Haifa Bay, the shore line is unindented for its whole length. Almost the entire coast is lined with sand dunes, which extend in some cases as much as 5 miles inland and attain a height of 65 feet. These dunes, unless fixed by vegetation, are spread inland by the wind and engulf further cultivable land. The dunes also prevent natural drainage to the sea and so were responsible for the formation of large swampy areas. Only in recent decades have most of these swamps been drained and intensive cultivation made possible. Because of these swamps and because of their light sandy soils, the coastal lands were formerly regarded by the Arabs as almost valueless from an agricultural point of view. Jewish willingness to purchase them was regarded as an example of the gullibility of a people ignorant of agriculture. Today, under intensive Jewish and Arab cultivation, the coastal plain has become by far the most important agricultural area of the country.

The soils of the coastal plain are sands, clays, and loams. Sandy soils predominate, particularly in the western belt of the plain. They are a product of the disintegration of the local Karkur sandy limestone. Primarily red, they are also mixed with yellow, brown, or gray matter. The air penetrates them easily, preserving hygienic soil conditions. Their mechanical properties make for easy cultivation, but they contain little food matter and require intensive fertilization. Their average water-holding capacity is about 30-40 percent of their own weight. A rich subsurface layer of clay occasionally increases this to 50 percent. These sandy soils are citrus soils par excellence, but they are also good for other subtropical fruits. When their clay content is relatively high they are good vegetable and fodder soils.

East of the belt of sandy soils, in the approaches to the hill country, and in the Acre (Zevulun) Plain, the coastal plain has some clay soils, more important in other parts of the country. South of the sandy soils (below Rehovot), from the sand dunes of the sea to the Judean hills and to the loess area of the Negeb, there lies a belt of loamy soils. These soils contain much more clay than the sandy soils farther north. Their water-holding capacity averages 40-50 percent of their own weight. They are richer in plant nutrients than the sandy soils and are almost as easy to cultivate. In some respects they are the best soils of the coastal plain, but lying in an area where water is scarce, they have been little cultivated.

Except at this southern margin of the loamy soils, the coastal plain has large quantities of underground water at very moderate depths. Thousands of wells have been dug without any serious sign of a general lowering of the water table. The loamy soils of the plain, from the Wadi Gaza to Rehovot, are in the 300 millimeter to 500 millimeter (12 to 20 inch) rainfall belt, but most of the plain receives from 500 millimeters to 700 millimeters of rain. It has mean annual temperatures of around 68° to 70° Fahrenheit, receives a large amount of total heat during the year, and—most important of all—is entirely free of frosts.

Through the coastal plain pass today, as in ancient times, the main land routes connecting Egypt, Lebanon, Syria, and Iraq (Mesopotamia). It contains the major cities of Haifa, Tel Aviv, and Jaffa, as well as smaller towns, such as Gaza, Acre, Petah Tikvah, Rehovot, Rishon, Ramleh, and Lydda. The coastal plain dominates Palestinian commerce and manufacturing, as distinctly as it dominates agriculture.

Haifa, with about 125,000 inhabitants, is the principal port of the country. It has one of the most modern harbors in the Mediterranean, with connections to the hinterland of Syria, Transjordan, and Iraq. Since 1935 one branch of the Iraq petroleum pipe line ends there. A large petroleum refinery has also been operating since 1940. About 55 percent of the population is Jewish. In many respects, Haifa Bay is the most advantageous location for the further development of Palestinian industry. It should also prove very attractive to tourists. The city extends from the flat lands along the bay upward, shelf above shelf, on the mountain side. It is at the extreme west tip of the Carmel mountains, with a wide view over the Mediterranean to the west and the Valley of Esdraelon to the east. Visible to the north is the old town of Acre, with its crusaders' walls, and farther north the eternally snow-capped Mt. Hermon.

Tel Aviv, 67 miles south of Haifa, is the largest all-Jewish city in the world. From 2,084 inhabitants in 1920, it grew to 46,000 in 1931 and about 170,000 at the end of 1944. It is the most modern city in Palestine and, by general reputation, the most modern in the whole Middle East. It is a market for the surrounding agricultural area and easily Palestine's most important industrial, commercial and financial center. Situated in the heart of the citrus belt, it is ambitious to displace Haifa as the great citrus exporting port. A lighterage basin was built during the disturbances of 1936-1937, but Tel Aviv does not as yet have a real harbor.

Tel Aviv's twin city, Jaffa, with a population of about 95,000, is fourth among the cities of Palestine. Having about 27,000 Jewish inhabitants, it is—like Haifa and Jerusalem—a "mixed" city. Its backwardness and squalor contrast all the more sharply with the clean modernity of Tel Aviv because the streets of the two cities actually interpenetrate one another. The port of Jaffa has lost much of its prospect of expansion since the establishment of a competing port in Tel Aviv. Jaffa's chief industrial enterprises are oil presses, soap manufacture, and cigarette production. The city is also a commercial and financial center for the Arabs of the southern coastal plain.

Valley of Esdraelon

The Valley of Esdraelon* is less than one-seventh the size of the coastal plain. It divides the mountain block of Lower Galilee from the mountains of Samaria. It provides a highway from Mesopotamia (Iraq) and Transjordan to the coastal plain and thence to Egypt. Through the center of the plain, where ancient camels passed, rail and motor roads run today.

The greatest length of the valley is about 30 miles (49 kilometers) and its greatest width about 12 miles. It has a deep, fertile, clay soil, with a clay content averaging 40-60 percent. Water penetrates into this soil slowly, but its water-holding capacity averages 55-70 percent of its own weight. It is rich in plant nutrients but difficult to cultivate and easily accumulates excessive salts if carelessly irrigated. When wet the soil is sticky. In drying it forms wide and deep cracks. Plowing tends to produce large clods which are hard to pulverize. Yet, with proper cultivation, it is a very good soil.

Due to its exposure to raids from "over the Jordan", the Valley of Esdraelon has been abandoned during periods of insecurity alike in the days of Gideon and during the early twentieth century. Before Zionist immigration, neglect of drainage had turned the valley into swampland infested with malaria. Jewish colonization has made it a rich producer of wheat, barley, sesame and fodder crops. In recent years, vegetables, grapefruit and even bananas have made progress.

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* A long history has given the valley a multitude of names, including Armageddon, Esdraelon, Megiddo, and Merj Ibn Amir. The eastern portion (north of the Gilboa mountains) and even the whole valley are also sometimes called the Valley of Jezreel. The Jewish population commonly refers to it simply as *the* Emek (i.e., *the* valley).

The greater part of the valley, west of Merhavia, is temperate, with breezes like those of the coastal plain and from 500 millimeters (20 inches) to 700 millimeters of annual rainfall. The elevation is generally from 25 to 50 meters above sea level. East of Merhavia, the land slopes gently down to 100 meters below sea level towards the Beisan edge of the Jordan valley. The mean maximum of the hottest month approaches 98° Fahrenheit. Rainfall drops to 400 millimeters.

Hula Plain

The Hula Plain today includes some of the most beautiful and productive and some of the most ugly, disease-ridden lands of Palestine. The plain is bounded by the Naftali hills of Upper Galilee on the west and by those of Golan and Bashan on the east. It extends south about 19 miles (30 kilometers) from the foothills of the Lebanon to the valley floor east of Safad, at the foot of Rosh Pina. On three sides the hills rise to an altitude of 3,300 feet (1,000 meters).

From east to west the valley is about four miles wide. The greatest contrasts are to be found in this small area. Here, in the north, are the sources of the Jordan, rich land well supplied with rain and perennial streams, growing crops of wheat, maize, fodder, vegetables, and deciduous fruits. Here also, out of a total land area of 190 square kilometers, 35 are swampy and heavily infected with malaria, though rich in peat and capable of being converted into excellent farm land. Plans have existed for many years to drain all of the swamp and part of the lake, but first the inactivity of the concessionaire, then lack of funds, and then the war, have kept anything from being done. The backward Arab villages around the swamp—with their mud houses and characteristic water buffaloes—contrast sharply with progressive Arab villages in other parts of the country.

Jordan Valley

The Jordan Valley, from the southern end of the Hula plain to the northern end of the Dead Sea, is about one-fifth as large as the coastal plain. It includes the Ginossar Basin, the north Jordan or Degania area, the Beisan plain, and the Jericho plain. From the southern edge of the Sea of Galilee to the Dead Sea, the Jordan runs for 121 miles (194 kilometers) through the center of the valley.

The valley itself is part of the depression that resulted from the break in the originally connected tablelands of Palestine and Transjordan. At its maximum breadth, the valley is 12 to 14 miles wide. From the height of over 3,000 feet (900 meters) above sea level reached by the neighboring tablelands, the depression falls nearly 4,300 feet to the surface of the Dead Sea. Along the valley, this fall takes place gradually. Lake Hula is 230 feet above sea level, Lake Tiberias already 686 feet below sea level, and the Dead Sea 1,286 feet below sea level. The waters of the Dead Sea reach a maximum further depth of about 1,300 feet.

In the northern part of the Jordan Valley the soils are similar to the clay ones of Esdraelon. In the south they contain more disintegrated limestone, producing a soil with excellent physical properties for irrigation and intensive cultivation. However, at least a third of the surface of the Jordan Valley is made up of ridged areas entirely unsuitable for cultivation. Moreover, in the lower Jordan—approximately from the Wadi Faria to the Dead Sea—all the soil, except for small areas such as the oasis of Jericho, is saline and unfit for cultivation except after de-salting.

The climate of the Jordan Valley is a trying one. Temperatures as high as 42° Centigrade (or 108° Fahrenheit) occur quite frequently in the summer, and these temperatures are accompanied by extreme humidity. Date palms, bananas, tomatoes, fodder, and other crops do very well under irrigation, but no agriculture is possible except where there is plenty of water. Dr. Ashbel has calculated average yearly evaporation at Jerusalem at 1,931 millimeters, at Jericho 3,140 millimeters, and at the north shore of the Dead Sea 3,750 millimeters. Agriculture has to make this intense heat —and its associated freedom from frost—into an advantage. Tomatoes and other vegetables grow in the Jordan Valley in winter without any of the expenses involved in hothouse cultivation.

THE HILL COUNTRY

The hill country of Palestine covers nearly 36 percent of the total area. It is more than twice as large as the major plains, but it is much less important from an economic point of view. A half century ago the situation was quite reverse. The hills were valued for their security and their healthfulness. Greater security, drainage, a new agriculture, industries, and world commerce have taken the primacy away from the hill country. There is no present reason to believe that it will ever be restored.

The hill country falls into three traditional divisions. Galilee is in the north, Samaria in the center, and Judea in the south. Measured through the center of the mountain block, the Galilean highland is about 27 miles (43 kilometers) from north to south and about 28 miles from east to west. The Samarian and Judean highlands constitute physically a single range of about 90 miles length and 33 miles width.

The greatest heights are reached in Galilee, where Jebel Jermaq (Mt. Azmon) rises to 3,963 feet (1,208 meters). Galilee is also the most fertile of the hill regions, with good—though often thin—clay soil and rainfall between 600 millimeters (24 inches) and 1,100 millimeters. It has numerous plateaus and valleys of considerable size which produce cereals, olives, vines, figs, almonds and tobacco. As an ancient refugee area, Galilee shelters a medley of population fragments—Moslems, Christians, Arabs, Druses, Circasians, Jews, and several other small groups.

Samaria is generally lower than Galilee, but it too has peaks (Mt. Ebal, Mt. Gerizim) of about 900 meters or 3,000 feet. Having fewer plateaus and smaller valleys than Galilee, its agriculture is less productive. The central and western part of the range has an adequate rainfall of 700 millimeters to 800 millimeters (28 to 32 inches) and shares with the rest of the hill country the advantage of getting some rain later in the season than the rest of Palestine. The eastern slopes, however, receive only the unsatisfactory rainfall of 300 millimeters. On such sloping land, little irrigation is possible. The region around Nablus has enough rain for wheat and barley. Otherwise the main crops are the less demanding olives, figs, and apricots. On very poor land, the farmer gives way to the herdsman. Apart from the Negeb, Samaria is the most exclusively Arab section of Palestine.

Least fertile of the main mountain areas is Judea. Little wheat is grown. Herds of sheep and goats utilize the poor natural pastures. Agriculture generally requires extensive stone clearance and terracing. Olives, vines, figs, and apricots are the principal sources of income for most agricultural villages. Recently apples, peaches, and plums have been added in Jewish settlements. There is also some poultry, bee-keeping, and special seed growing. Vegetables are grown to supply the town markets of Jerusalem, Hebron, and Bethlehem. Hebron is an important grape center.

About 15 miles (25 kilometers) south of Hebron the mountains reach the margin of the Beersheba basin, the approximate southern limit of dominantly non-nomadic settlement. In all the area south of this line, rainfall is below 300 millimeters (12 inches). On the east of Jerusalem, the margin of settlement is reached more quickly. The Judean wilderness is in full sway 3 miles from the Mount of Olives. Here for an area of over 1,000 square kilometers (about 4 percent of the total area of the country) is an irredeemable desert of sheet rock, with slopes to be mastered only by goats, and a rainfall that diminishes rapidly from 400 millimeters to 50 millimeters. The wilderness extends all along the Dead Sea, except at its northern tip, in the wildest and most desolate area of all Palestine.

Of cities over 20,000 in population, the hill country has only three: Jerusalem (about 150,000), Nablus (about 24,000), and Hebron (about 25,000). Jerusalem, the capital of the country, is a city of hills rising on Mt. Scopus to 821 meters (2,693 feet) above sea level. It is a city of barrenness and beauty, of wide aspects, modern quarters and decayed slums. It is a city of government and religion much more than of modern industry, but it is acquiring industrial suburbs. About 65 percent of the population is now Jewish. Government regulations are almost equally severe on industry and night-clubs, both being regarded apparently as a derogation of the city's holiness. Standing two streets west of the central government offices and looking east, one can see the Old City of Jerusalem below and the hills of Transjordan in the distance. Flocks of goats come down the city streets, nibbling at the grass on the thin soil and mounting low stone walls to eat the branches of trees. Down the street there is the junction of two modern motor roads, and a shingle holds the name of a specialist in children's diseases from Vienna.

THE NEGEB

The Negeb (south) of Palestine contains 45 percent of the area of the country but only 4 or 5 percent of the population. As a natural region, defined by rainfall and soil structure, it is slightly smaller than the administrative sub-district of Beersheba. Beginning at the coast at the Wadi Gaza, it runs south of the foothills of Bir Abu Mansur, and south of the Hebron hills to the Dead Sea near Ras Zuweira. This frontier is approximately that between the loamy soils of the north and the loess soils of the south, but the Negeb also contains a coastal stretch of sandy soils reaching down to Khan Yunis. At the coast, the boundary of the Negeb is approximately along the 300 millimeter (12 inch) rainfall line, but at Ras Zuweira it reaches the 100 millimeter line.

The population of the Negeb is variously estimated at between 60,000 and 80,000. About 10,000 live in Khan Yunis, many working for neighboring military installations. About 1,600 live in Rafa and about 4,000 in Beersheba town. Of the population of these three towns, perhaps one-third receive their living from agriculture, partly—in the sandy coastal stretch—of an intensive, irrigated type. The remaining population of the Negeb is represented principally by seven groups of nomadic tribes with a population variously estimated between 47,500 and 60,000. Of these nomads, about 1,500 or 2,000 live in the northern coastal area and plateau, where a considerable amount of occasional agriculture is possible. They plant barley, and if the rains are good they have barley bread to add to their diet of milk from goats, sheep and camels. The rest of the nomads live in the Negeb hills and the Araba where, for lack of water, agriculture is impossible. The central Negeb receives only 50 millimeters (2 inches) of rainfall per year. The region around Akaba receives only 25 millimeters. Except at the Asluj wells, about 15 miles (25 kilometers) due south of Beersheba town, there are few places in the Negeb that can provide sufficient underground water even for drinking, let alone for irrigation.

Yet in the northern Negeb, both in the coastal area and in the plateau, a substantial amount of land is occasionally cultivated. Over 2 million dunums may be used from time to time. The loess soil is good. It is composed of sand particles, 10 to 20 percent clay, and 10 to 30 percent rock flour. It is usually 2½ meters or more in depth. It is a soil that absorbs water slowly but holds it well. Moreover the climate is good. Dr. Ashbel has been quoted above on the subject of the large amount of dew available. He concludes that ". . . from the point of view of temperature and humidity the term 'desert climate' does not apply to the Negeb; . . . as compared with 16 chamsin days and dry nights during the month of May in Jerusalem, there were only two dry nights in Gevulot,* the remaining fourteen nights having a humidity of up to 100 percent. In Tel Zofim ** and Beit Eshel † there were six nights without dew. In these localities the temperature drops as low during the night as in the hills. The problem of water duty here is less acute owing to the extreme humidity in the air during the nights, and there are few hours of evaporation when the humidity disappears." All this was unknown until 1943, when the Jewish Agency established three experimental settlements in the Negeb.

A great deal more remains to be learned. The Negeb is not "in the first line" for intensive agricultural settlement. But it now seems possible that, given cheap water from the north, the northern Negeb may be able to support intensive agriculture if products are found in which it can overcome its handicaps of transport and distance from the urban markets. This general conclusion was reached by Sir John Hope-Simpson more than a decade ago when he said of the Negeb, "Given the possibility of irrigation, there is practically an inexhaustible supply of cultivable land." A great deal more is known now about the Negeb than was known to Sir John Hope-Simpson, but a firm economic basis for intensive settlement has not yet been found. Until it is found, the Negeb will remain primarily the home of the nomad Arab with his meager crops of barley and his wandering flocks.

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* Negeb, southeast of Rafa.

** Negeb, near Asluj.

† Negeb, east of Beersheba town.

POPULATION DISTRIBUTION

The variations in Palestine's relief, climate, soils, and natural communication advantages are reflected in the regional distribution of her population. The great concentration is in the coastal plain. The valleys of Esdraelon, Galilee and the central Jordan are also relatively densely populated. The lower Jordan is very thinly populated. In the hill country high population densities occur only in a few favored areas, especially in the environs of Jerusalem and the other principal towns. The Negeb has the sparsest population.

PALESTINE'S POPULATION, BY NATURAL REGIONS, END 1943

	Non-Jewish population	*Jewish population*	*Total population*	*% of total population*	*% of total land area of Palestine*
Coastal plain	405,000	402,000	807,000	47.1	12.0
Other valleys	33,000	31,000	64,000	3.7	5.0
Hill country	665,000	106,000	771,000	45.0	36.6
Negeb	70,000	75	70,000	4.1	46.4
TOTAL	1,173,000	539,000	1,712,000	100.0	100.0

Sources: For Jewish population, D. Gurevich, et al., *Jewish Population of Palestine*, Jerusalem, 1944. For non-Jewish population, authors' own estimates, based principally on the Government of Palestine's unpublished, *Village Statistics*, 1943. All totals rounded to nearest thousand.

The Jewish population is especially concentrated in the coastal plain and the northern valleys. Fully 74.5 percent of the Jewish population lives in the coastal plain and 5.5 percent in other plains. In contrast, only 34.5 percent of non-Jews live in the coastal plain and only 2.8 percent more in other plains.

The contrast is even more striking among the rural population alone. Of the Jewish rural population, 77.2 percent live in the coastal plain, 16.4 percent in other plains and 6.4 percent in the hill country. Of the Arab rural population, 23.3 percent live in the coastal plain, 3.4 percent in other plains, 66.7 percent in the hill country and 6.6 percent in the Negeb.

Because of the great regional variations in population density, comparisons of the average density of Palestine as a whole with the average for other countries are not very meaningful. In 1940 the Negeb (Beersheba sub-district) was estimated officially to have an average population density of a little under 11 persons per square mile—about the same as that of the State of Oregon. Apart from Beersheba sub-district, the average population density per square mile in Palestine in 1940 was 290. This figure is surpassed only by highly industrial states in the United States. Palestine's 290 compares with 546 for Massachusetts, 281 for New York, 168 for Ohio, 45 for Iowa, 44 for California and 11 for Oregon. The average figure for the whole United States in 1940 was 44.

PALESTINE'S RURAL POPULATION, BY REGIONS, 1944

	Arab rural population	*Jewish rural population*	*Total rural population*	*% of total rural population*	*% of total land area of Palestine*
Coastal plain	185,000	110,000	295,000	31.5	12.0
Other valleys	27,000	23,325	50,325	5.4	5.0
Hill country	529,000	9,000	538,000	57.5	36.6
Negeb	52,000	75	52,075	5.6	46.4
TOTAL	793,000	142,400	935,400	100.0	100.0

Source: Estimate of Joseph Weitz, *Palestine Review*, April 1945. People other than Arabs and Jews are insignificant in rural areas.

In Europe also only the most industrialized regions have a population density comparable to that of Palestine without the Negeb. Countries of advanced agriculture, such as France and Denmark, have only about 195 and 230 per square mile respectively. The most intensely industrialized areas, Belgium and the Netherlands, have about 700 per square mile. The poverty-stricken Nile Valley and the island of Java have, of course, even higher population densities than the most industrial regions of Europe and America. Here lies the great divide. Industrialization, new methods in agriculture, and high capital investment can make possible considerable population increase and a Western standard of living. Adherence to the old methods with unlimited population increase would lead to the fate of the dwellers in the Valley of the Nile, where an ever more painstaking agriculture yields the same miserable standard of living to an ever increasing population.

CHAPTER 11

THE PEOPLES

MAJOR GROUPS

The two major groups of the population of Palestine, according to national allegiance, are Arabs and Jews. At the end of 1944, only about 2 percent (34,000) of the people permanently resident in the country were persons outside these two national groups. About 66 percent (1,185,000) of the total population was Arab, and about 32 percent (565,000) was Jewish.

According to religion, about 90 percent of the Arab population is Moslem, about 9 percent Christian and about 1 percent Druse. The Jews by nationality generally profess a more or less orthodox Jewish faith; a considerable number, however, have no religious affiliation, and a handful are Christian. The persons of neither Arab nor Jewish nationality are almost all Christian.

The Moslems of Palestine, with insignificant exceptions, speak Arabic as their mother tongue and are Arab in national sentiment. Three-quarters of the Christians also speak Arabic as their mother tongue and may also be regarded as Arab in national sentiment, though not so unequivocally as the Moslem Arabs: an undertone of fear of religious persecution inhibits full national cooperation of Christian Arabs with Moslem Arabs. In addition to the religious cleavage, there is an economic and cultural one deriving from the fact that the Christian Arabs of Palestine are about three-quarters an urban people, while the Moslems are little more than one-quarter urban. Christian Arab villages and towns are generally better developed, cleaner, and have more non-Arab elements than Moslem villages and towns. The great Arab families of Palestine—such as the Husseinis, the Nashashibis, the Tuqans—are all Moslem. When a Christian Arab looks for a strong point of support, he is likely to look outside the Arab community.

The Arab population consists predominantly of persons whose ancestors have lived in the country for many centuries. In the past quarter century, however, when Palestine has been progressing economically more rapidly than neighboring countries, economic opportunity has attracted Arab immigrants, principally from Lebanon, Syria, Transjordan and Egypt. Arabs not born in Palestine now constitute 2 or 3 percent of the total Arab population. These Arab immigrants are indistinguishable from the Arabs previously in the country except in possessing less firm local roots. For the most part, the Arab population is still earthbound in its habitation and traditional in its occupations. Intermarriage is infrequent even between neighboring villages. Arab peasants are accustomed to seeking supplementary work in towns or in harvesting outside their own villages, but only exceptional circumstances (blood-feud or famine) will cause a peasant to sever completely his ties with his native village.

Unlike the Arabs, the Jews are not primarily people born in Palestine. They have come to Palestine from the ends of the earth. About two-thirds of the Jews living in Palestine at the end of 1944 were immigrants. A principal grouping of the Jewish population is consequently one that reflects the diversity of the societies from which Jews have come to Palestine.

Perhaps four-fifths of Palestine's Jews were originally Ashkenazim, or Jews from eastern, central, or northern Europe. Most of them know Yiddish and have some European cultural heritage. They display, however, very important differences as the results of their particular European backgrounds. A Jew from the east European Pale is not a German Jew. In Palestine the east European element (under Russian Jewish leadership) is dominant in Jewish community affairs and labor organization but not so dominant in business. The unification of east European with central European elements has not always been easy. The German Jew might describe his earlier-arrived co-religionist as a backward "Asiatic". The Asiatic replies by naming the German Jew a "Jacke" —in contemptuous reference to the bourgeois jacket inevitably worn by men who came from Germany.

Less Western than the Ashkenazim are the Sephardim, or Mediterranean Jews. Many of them formerly spoke Ladino—a mixture of fifteenth century Castilian and Hebrew. They account for about one-tenth of the total Jewish population of Palestine. They wield little influence in the present Jewish community, though their pronunciation of Hebrew has largely prevailed over that of the Ashkenazim. Feelings between Ashkenazim and Sephardim have not always been cordial. A great Hebrew poet of Ashkenazi origin is famous (or infamous) for the statement that what he disliked about the Arabs was that they reminded him of the Sephardic Jews.

The least Western element of the Jewish community consists of the Oriental Jews, of long residence in Palestine, Yemen, Iran or elsewhere in the Middle East. Accounting also for about one-tenth of the present Jewish population of Palestine, they are its lowest class—economically, socially, and culturally. Their mother tongue is commonly Arabic. Though their condition in Palestine is greatly superior to that in their countries of origin, their status—as equal members of the Jewish Palestinian community—still leaves much to be attained.

GROWTH

The rate of population increase has been greater in Palestine during the past 25 years than in any other country. After several centuries in which the number of people in the country showed no decided trend, the population began to increase during the last half-century before World War I. The increase was at a rate which might have led to its doubling in about a century. Under the changed circumstances which prevailed after 1919, the doubling was achieved in 16 years. At the end of 1944, Palestine's total permanently resident population was probably in excess of 1,779,000, or more than 2.7 times its magnitude 25 years earlier. Precise population figures are, however, unattainable because there has been no census since 1931, though one is contemplated during 1946.

OFFICIALLY ESTIMATED POPULATION OF PALESTINE

Year-end	*1919*	*1929*	*1934*	*1939*	*1944*
Moslems	515,000	712,000	814,000	927,000	1,064,000
Jews	65,000	157,000	283,000	446,000	525,000
Christians	63,000	82,000	102,000	117,000	136,000
Others	5,000	9,000	11,000	12,000	14,000
TOTAL	648,000	960,000	1,210,000	1,502,000	1,739,000

Sources: Palestine Royal Commission, *Report*, 1937; *Palestine Blue Book*, 1938; *Statistical Abstract*, 1943; *General Monthly Bulletin of Current Statistics*, various issues (cited hereafter as *General Bulletin*). End 1944 figures estimated by authors from official third-quarter data.

The official estimates of the population of Palestine are at least 40,000 too low for the end of 1944. Their largest error is an underestimation of the permanently resident Jewish population. The official figures disregard immigrants in Palestine not legally registered; they list as "Others" a number of Jews who profess no religion, and omit Jews who deliberately avoided enumeration in 1931. The Statistical Department of the Jewish Agency,* which corrects such omissions, estimates that the Jewish population of Palestine at the end of 1944 numbered about 565,000, or about 40,000 more than are covered by the official estimate.

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* We are satisfied, after examining the methods used by the statistical staff of the Jewish Agency, that its estimate of the number of Jewish residents of Palestine is more likely to be correct than the official one. We shall, therefore, use the Jewish Agency's estimate in this study wherever possible.

Moreover, there are two sources of understatement of the magnitude of the non-Jewish population. First, records of births and deaths are still not entirely complete in Palestine. Incomplete reporting is most likely to affect isolated Arab villages. Since the population is growing, a random distribution of errors of incomplete reporting is likely to make for understatement. Second, the non-Jewish immigration has probably been understated by some thousands. Arabs from neighboring Transjordan, Syria and Lebanon can walk into Palestine at hundreds of uncontrolled points without any immigration formalities. The drift has been towards Palestine—not away from it. For these reasons, the official estimates of the non-Jewish population are probably low. Since, however, we are not in a position to calculate the amount of understatement, we shall use the official estimates of the non-Jewish population throughout this study.

In spite of the great importance of immigration in Palestine's population growth, natural increase (the excess of births over deaths) has been still more important. Over the 25 years 1919-44, natural increase has accounted for about three-fifths of the total population growth, while immigration has accounted for only about two-fifths. Immigration has been more than ten times as important a factor in the growth of the Jewish population as it has been in the non-Jewish.

INCREASE IN THE POPULATION OF PALESTINE, 1922-43

	Non-Jews		*Jews*		*Total*	
Natural increase	466,000	93%	105,000	25%	571,000	62%
Net immigration	37,000	7%	315,000	75%	352,000	38%
TOTAL	503,000	100%	420,000	100%	923,000	100%

Source: Official figures adapted from *Statistical Abstract,* 1943.

Both the Arab and Jewish populations are quite equally divided between males and females. Among the Jews, this balance is the result of deliberate immigration policy. Among the Arabs, it results from the comparative unimportance of immigration. Palestine has a high percentage of children, a high percentage of people of active working age, and a small percentage of old people. About two-fifths of her total population is below fifteen, compared with one-fourth in the United States. Only about 13 percent of Palestine's population is over 50, compared with 20 percent in the United States.

AGE DISTRIBUTION OF THE PEOPLE OF PALESTINE, 1943

Age	*Non-Jews*	*Jews*	*Total*
0–15	43.5%	27.1%	38.2%
15–50	43.7%	60.4%	49.2%
50 and over	12.8%	12.5%	12.6%
	100.0%	100.0%	100.0%

Source: Unpublished manuscript supplied by Professor R. Bachi, Jerusalem.

Palestinian non-Jews have a normal age structure for a very rapidly increasing population. The Palestinian Jewish age structure, on the other hand, reflects the presence of a large number of young immigrants, who do not have many children.

NATURAL INCREASE

The rate of natural increase in Palestine today is the highest recorded in any country.

NATURAL INCREASE PER THOUSAND PEOPLE

	United States	*Australia*	*South Africa*	*Egypt*	*India*	*Palestine*
1921–25	10.7	14.4	17.4	17.6	6.7	22.6
1935–39	6.1	7.7	14.9	16.0	11.4	25.4
1940–43*	8.7	8.6	15.8	15.1	11.3	23.2

Sources: League of Nations, *Statistical Yearbook, 1941–2* and *Addendum, 1942-3; Statistical Abstract,* 1943. *Egypt and India 1940; S. Africa 1940–41; U. S. and Australia 1940–42.

The demographic pattern of the various groups of the population is, however, extremely diverse. It is primarily the Arab group which is responsible for the unique rate of natural growth. This fact shows up clearly in the official figures on Moslems (almost all Arabs) and in the official figures on "Others" (almost all Arab Druses). It is obscured in the official figures on Christians by the dual composition of the group, partly native Arabs and partly foreign non-Arabs. The contrast with Jewish demography is most striking.

COMPARATIVE DEMOGRAPHIC PATTERN OF PALESTINIAN PEOPLES

(*all official figures, 1940–43*)

	Moslems	*Others*	*Christians*	*Jews*	*Total*
Birth rate per 1,000	48.6	44.9	30.2	24.0	39.5
Death rate per 1,000	20.7	17.7	11.7	8.1	16.3
Natural increase per 1,000	27.9	27.2	18.5	15.9	23.2
Infant mortality per 1,000 infants*	139.4	128.1	96.9	57.3	121.8

Source: *Statistical Abstract,* 1943 and *General Bulletin,* 1944 issues. *1940–41.

Moslems alone had a natural increase of 27.9 per thousand (per year) in the years 1940-43. This high rate of natural increase is not due to temporary phenomena. On the basis of the experience of these years, a Moslem woman who lives through the child bearing age (15-49) will, on the average, have 7.8 children! A Moslem girl aged 15 will, on the basis of the fertility and mortality experience of the same years, on the average, have 2.4 daughters who will live to be age 15. Therefore, to employ the terminology of modern students of population problems, the Moslem "net reproduction rate" was 2.4 during the years 1940-43. During the years from 1927 to 1943, the Moslem net reproduction rate ranged from 1.4 to 2.7, with a rather steady upward trend.

The reason for the phenomenally high net reproduction rate of Palestine Moslems is improvement in economic conditions unaccompanied by any important tendency toward a voluntary limitation of births. The Moslem death rate is still high—higher than that of any European country except Malta,—but it is lower than the death rates of many South American countries and most Asiatic countries. Mortality of Moslems 10 years of age and over is approximately the same as that of Europe. The weak die young. The mortality of infants up to one year of age (during 1937-39) was 142 per thousand among Palestine Moslems compared with 62 per thousand in northern Europe.

Since infant mortality responds readily to improved sanitary conditions, better education, and a higher standard of living, Moslem infant mortality has been reduced greatly. Between 1927-30 and 1937-39, there was a fall from 198 per thousand to 142 per thousand. In another decade, the rate might well be reduced to 100. Were such a decline in infant mortality to be accompanied by continued adherence to religious and customary barriers to the voluntary limitation of births, the Moslem population of Palestine would experience a rise even in its present high rate of natural increase. It is not likely that voluntary limitation of births will become significant among Palestine Moslems in the next decade.

Assuming an expanding, welfare-minded economy—which would stimulate births and keep infants alive—it would be very unwise to count on the Moslem population of Palestine showing a natural increase, during the next decade, at an annual rate of less than 28 per thousand. This was the actual rate of the years 1940-43. A modest economic and hygienic progress might easily mean a rate of 30 per thousand. This rate will be assumed for the analysis of the problems of an expanding economy attempted in Part IV of the present investigation. It is a rate of population increase unparalleled in any other country of the world and presents the

Palestinian economy with a correspondingly great challenge.

The population outlook for the Jewish community of Palestine is quite different. It is true that the Jewish rate of natural increase is also now high. In the years 1940-43, that rate averaged about 15 per thousand (according to the Jewish Agency figures), or about one and three-quarters times the natural increase of the U.S.A. But the high rate of natural increase of the Jewish community reflects the high percentage of young people among those Jews who emigrated to Palestine. Without continuance of the same type of immigration, this abnormal age composition cannot persist. In 1940-43, the Jewish birth rate was high (about 22.6 per thousand) because the number of Jewish women of child-bearing age was abnormally high; the Jewish death rate was low (about 7.6 per thousand) because the Jewish community had an abnormally small percentage of old people. The Jewish population is aging, and as it ages the "windfall" of births will disappear and the death rate will rise. The Jewish infant mortality rate (56 per thousand) was already in 1937-39 substantially lower than that of northern Europe (62 per thousand). In 1943 Jewish infant mortality was down to 44 per thousand (compared with 43 for whites and 73 for Negroes in the U.S.A., in 1940). There is little further room for increasing population by life-saving in this direction.

On the basis of the experience of the years 1940-43, the average Palestinian Jewish woman who lives through age 49 will have only 2.3 children, while a Moslem woman will have 7.8 children. A Jewish girl aged 15 will have 1.0 daughters who live to be age 15, while a Moslem girl will have 2.4. In fact, the Jewish net reproduction rate averaged only about 0.92 in the years 1938-42. Only the extraordinarily large number of births during the year 1943 brought the 1940-43 average up to unity. In the year 1943 the Jewish net reproduction rate was 1.275 (and the Moslem rate 2.726). This high rate was due to making up a "backlog" of births, under war-boom conditions.

In the years 1927-35, the Jewish net reproduction rate averaged about 1.3. Since then it has hovered around 1.0. Perhaps the most important single factor in this decrease has been the increasing weight of central and western European Jews in the Palestinian population. Other factors acting in the same direction were the 1936-37 disturbances, the uncertain future of the Jewish national home in Palestine climaxed in the White Paper of 1939, and the early stages of World War II with the disruption of families and the advance of Rommel toward the Nile. In such extremely disturbed conditions, the Jewish people have been reluctant to have children.

The Jewish community has undertaken propaganda in favor of more births and is contemplating aid to parents, designed to raise the net reproduction rate above unity. In view, however, of the family trends dominant in all modern societies, a rate substantially above unity cannot be anticipated. Assuming an expanding economy and encouragement of births (and making allowance for the present age distribution), Jewish natural increase might, at most, average as high as 15 per thousand per year for the next decade. This would mean an average birth rate of about 23 and death rate of about 8.

The Christian and "Other" populations of Palestine have demographic patterns in between those of the two major groups. The "Other" consisting of small groups living under social conditions very similar to those of the Moslems, have a demographic pattern very close to the Moslem one. The Christian group is demographically closer to the Jewish, both because it contains a considerable European element and because its Arabs are largely urban.

In accordance with the trend in recent years, but allowing some margin for improved hygienic conditions, we have assumed that over the next decade the "Other" group of the Palestinian population will increase at the rate of 30 per thousand per year. This is the same rate as that assumed for the Moslem population. In the Christian case, however, we have assumed a natural increase of only 20 per thousand, since this group contains a considerable European element and since it may be expected, as an urban population, to show a more "Western" response to expanding economic opportunity.

PROJECTED POPULATION OF PALESTINE, 1944-1954

(*without immigration*)

	Year end 1944	*Year end 1949*	*Year end 1954*
Moslems	1,064,000	1,234,000	1,430,000
Jews	565,000	609,000	656,000
Christians	136,000	150,000	166,000
Other	14,000	16,000	19,000
TOTAL	1,779,000	2,009,000	2,271,000

Assumptions: natural increase per year, Moslems 30 per thousand; Others 30 per thousand; Christians 20 per thousand; Jews 15 per thousand.

It must be emphasized that the above figures are rough assumptions adopted because they are believed to be consistent with the present demographic facts and the premise of an expanding economy. These figures do not constitute a forecast. They disregard immigration entirely but assume—for sake of analysis—that an expanding economy is possible without immigration. Though based on assumptions with regard to Jewish population growth which most students would reject as too high, they involve a substantial decline in the Jewish share of the total population. The Jewish share, which is 31.8 percent in 1944, falls to 30.3 percent in 1949 and 28.9 percent in 1954.

IMMIGRATION

In the past quarter century, Palestine's immigration has been as unique as its natural increase. In addition to having the highest recorded rate of natural increase in the world, Palestine was also the country in which immigration made the greatest percentage contribution to population growth. Over the whole period 1919-44, the share of total population growth accounted for by net immigration was at least 39 percent. Total net immigration was at least 425,000.

Of this total net immigration, perhaps 385,000 was Jewish and a minimum of 40,000 non-Jewish.* Precision is impossible because a substantial part of the immigration is not legally recorded. It was an open secret at the end of 1944 that there were some 20,000 illegal Jewish immigrants in Palestine, who had entered the country since the enunciation of the White Paper policy of 1939.

It was also known that there were many thousands of illegal non-Jewish immigrants. The official figures show only about 31,000 non-Jewish immigrants under the Mandate, but a great many more Arabs have come in without legal formalities. The frontiers of Transjordan, Syria and Lebanon lie open to crossing by anyone who goes on foot or by donkey trail. The peoples on both sides of the frontiers are indistinguishable. Harvest labor traditionally came from Transjordan to Palestine. In bad years, the Hauran (Jebel Druse) sends out thousands of her most poverty-stricken sons in search of bread, and many of them come to Palestine. It is therefore not difficult, in spite of the complete absence of statistical evidence, to credit popular belief that Palestine has, on the average, retained a few hundred of her Arab visitors, each year, during the 25 years of the Mandate.

This substantial net immigration has been the result of an even larger gross immigration and a not inconsiderable emigration. Emigration was most important in the 1920's, when many "overseas" countries were still prepared to receive immigrants and when Palestine made no such rapid economic progress as in the 1930's. In the period 1919-31, Palestine had a gross immigration of about 116,800 Jews and an emigration of about 30,400 Jews, leaving a net immigration of about 86,400. In the period 1932-43, there was a gross immigration of approximately 304,300 Jews and an emigration of about 20,100, leaving a net immigration of about 284,200. For the whole period 1919-43, therefore, it was necessary to bring about 114 Jews into the country to achieve a net gain of 100.

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* Excluding approximately 10 thousand Moslems treated as "immigrants" in the official figures, who were added to the population by the alteration of the boundaries with Syria and Lebanon in 1923.

The following table indicates the wide fluctuations in the rate of Jewish immigration even during the peace years 1932-39. In the years from 1936 the inflow was much smaller than the number who desired to enter, due to Government restrictions only partly offset by illegal entry.

NET JEWISH IMMIGRATION INTO PALESTINE, 1932-39

Year	*Number of immigrants (in thousands)*	*Number as % of Jewish population at end previous year*	*Number as % of total population at end previous year*
1932	13.5	7.7	1.3
1933	38.6	19.3	3.6
1934	42.8	13.3	3.7
1935	65.1	21.1	5.3
1936	21.2	5.7	1.6
1937	4.5	1.1	0.3
1938	8.1	1.9	0.6
1939	37.6	8.4	2.6

Sources: Jewish Agency figures for Jewish population and immigration; Government figures for other.

Before World War I, there was a considerable emigration of Palestinian Arabs from Palestine to Egypt and North and South America. Christian Arabs came to the United States from Palestine—as from all Arab countries—to make their fortunes. After World War I, this Arab emigration continued in the early 1920's but then almost disappeared. Most non-Jewish emigration from Palestine has been that of Europeans who were being replaced in their work for Government, missionary services or foreign firms.

Of the Jews whose citizenship is known, among those who came to Palestine in 1919-42, fully two-thirds came from eastern Europe. Poland alone accounted for 42.2 percent, the U.S.S.R. for 9.4 percent, Rumania for 5.6 percent, Lithuania for 3.0 percent, Greece for 2.0 percent, Latvia for 1.5 percent, Turkey* for 1.2 percent, and Hungary for 1.1 percent. They were predominantly poor Jews, and for them Palestine meant economic opportunity as well as reaffirmation of their nationality.

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* Turkey in Europe primarily.

About 4.8 percent of all the Jewish immigrants came from the Yemen and Iraq. They were primarily the poorest of the poor, living persecuted and precarious lives, for whom Palestine meant an ascent to a higher culture and greater economic opportunity.

Some 19.7 percent of all the Jewish immigrants came from three central European countries—Germany 13.5 percent, Austria 3.0 percent and Czechoslovakia 3.2 percent. These were mostly middle-class people, who had to adjust themselves to a less-developed society than that to which they had been accustomed.

Of the remaining countries of the world, only the United States supplied Palestine with a number of immigrants worth mentioning. This was 8,043, or 2.4 percent of the number whose citizenship is known. The riots of 1936-37 and the thrust of Rommel towards the Nile sent most of these back to the United States. Precise information is unavailable, but it is estimated that at least three-quarters of the total number have now left Palestine.

The Jewish immigrants into Palestine have been a very unusual group. This distinctiveness was particularly marked in the days before World War II, when the need to save Jews from death was not so overwhelming as to suspend all possibility of selection. The Zionists early established far-reaching measures for selecting immigrants from those who by occupation, health and character were regarded as best fitted to serve the Jewish community. The Government of Palestine made this selection possible by delegating to the Jewish Agency the task of choosing the particular individuals to be admitted under the general quotas for laborers established by the Government. In turn, the Zionist Organization put forth a perhaps greater organized effort in selecting and training prospective immigrants than has ever been accomplished for any other immigration. The Zionists established about 365 training centers in 24 countries. These centers had about 35,000 trainees in 1935 and about 24,000 in 1936. They trained the prospective immigrant for a career of manual labor in Palestine and attempted to prepare him for the mental climate of the country. A related activity was the Youth Aliyah, which took young people and children—separated from their parents—and trained and educated them, in Palestine, to be responsible members of the Jewish Community. As an activity of child rescue and social welfare, the Palestinian Jewish Youth Aliyah challenges comparison with any activity of the kind in the whole world.

About 45 percent of the Jewish immigrants who entered Palestine in the years 1919-44 came as workers desiring a job. Perhaps

23 percent were persons with capital. Approximately 22 percent were dependents of Palestinian residents. Some 6 percent were students. The remaining 4 percent consisted of persons falling into various minor categories.

The capitalist group was very important. A person was required, in the 1930's, to have at least £P 1,000 to qualify for entry under this category. In 1936 the Jewish Agency estimated that persons entering as capitalists had in fact brought in an average of close to £P 2,500. This high figure reflects, in large part, the character of the post-1932 migration from central Europe. The central European refugees commanded more capital than the earlier immigrants and had more experience in modern industry. They also included many technical experts, scientists, and scholars of wide repute. Yet there is no unanimity in the Palestinian Jewish community about the value of this post-1932 immigration as compared to earlier waves. Many Zionists are inclined to regard much of the post-1932 immigration with a degree of disdain because it did not come to Palestine out of pure Zionist motives.

In spite of the rapid growth of the Palestinian economy in the 1930's, there was a considerable under-utilization of immigrant skills. In the case of doctors, for instance, immigration gave Palestine an over-supply. While in the United States (1940) the ratio of doctors to total population was 1 to 797 and in Great Britain (1937) about 1 to 1,085, in Palestine (1940) it was 1 to 676. Since about four-fifths of the doctors in Palestine are Jewish, the number of doctors in Jewish population centers was excessive; in 1936 there was 1 doctor for every 161 persons in Tel Aviv, and many were forced to abandon medicine. At the same time, most Arab villages had no medical care. Only with the outbreak of war did there emerge an effective demand for these immigrant medical skills. The same is true of many other kinds of specialized training, for which the wartime economic expansion in Palestine had need.

HEALTH

The best single measure of health conditions is the number of years a person may expect to live. Among the thirty-one nations (not including Palestine) for which the League of Nations has assembled statistics, life expectancy (average for males and females) ranges from less than 27 years to fully 67 years. By this measure, the health of Palestine Jews is among the best in the world. The Palestine Jewish life expectancy of 63.5 years is only 3.5 years lower than the highest. Palestine Jews have much better health and consequently longer lives than citizens of such advanced countries as the United Kingdom, France and Germany.

Palestine Moslems now have a life expectancy (48.4 years) fully fifteen years shorter than that of Palestine Jews. They are, however, better off than the populations of 7 out of the 31 other nations who are sufficiently advanced to have statistics on these matters. Their life expenctancy today (1938-40) is, in fact, almost identical with that of U.S. Negroes nine years earlier (life expectancy 48.5 years, 1929-31).

The improvement in the health of all Palestinians has been very striking. In a period of about 14 years, nearly 9 years were added to the average life which a Jew might expect to live and nearly 11 years to the average life of a Moslem.

LIFE EXPECTANCY OF PALESTINIAN PEOPLES

	Jews		*Moslems*	
	Males	*Females*	*Males*	*Females*
1926–27	53.3	55.9	37.6	
1936–37	60.6	64.2	45.8	
1940–41	62.3	64.6	47.5*	49.2*

Source: R. Bachi, *Demographic and Health Conditions in the Yishuv,* July 1944, Jerusalem, unpublished. *1938–40.

The health of children has improved particularly. As a result of this progress, Palestine Jews have achieved a lower infant mortality than that of any but the most healthy countries. Palestine Moslems have a better record than that of many Latin American countries and most Asiatic countries.

MORTALITY DURING THE FIRST YEAR OF LIFE

(per 1,000 live births)

	Palestine		*U.S.A. and*	*Latin*	
	Moslems	*Jews*	*Canada*	*America*	*India*
1928–30	193.6	84.0			
1934–36	155.3	72.8	62.6*	141.8*	173.8*
1940–43	135.3	55.6			

Source: R. Bachi and G. Kallner, *Acta Medica Orientalia,* January, 1945.
*Average of years 1929–36.

No comparable improvement has taken place in any neighboring Moslem country. The districts of Egypt which have a health bureau show a decline in the rate of infant mortality only from 224 in 1921-25 to 203 in 1936-39. In Iraq infant mortality in the three main towns (Bagdad, Mosul, and Basra) has declined from a rate of 318 per thousand in 1927-33 to 227 per thousand in 1938-41. In Transjordan the decline has been only from 209 in 1929-32 to 195 in 1936-38.

The uniquely low level of Moslem infant mortality in Palestine—low, that is, by Middle East standards—is directly related to the economic progress and improved hygiene resulting from Jewish initiative and Jewish example. The relationship holds not only for Palestine as a whole but even for the several districts of the country. Professor R. Bachi has shown that the various districts of Palestine have experienced decreases in Moslem infant mortality in direct relation to the percentage of Jews who have come to live among the Moslem rural population in those districts.

EFFECT OF JEWISH IMMIGRATION ON PALESTINE MOSLEM INFANT MORTALITY, 1928-39

Sub-district	*% of Jews among rural population*	*% reduction in Moslem mortality during first year of life, 1928-30 to 1937-39*	*% reduction in Moslem mortality during first five years of life 1928-30 to 1937-39*
Jaffa	39.8	48.2	51.0
Haifa	21.3	33.9	42.1
Ramle	17.4	24.4	30.7
Nazareth Tiberias Tulkarm	5.5 to 15.1	25.1	23.3
Other	0 to 4.9	26.8	25.9

Source: R. Bachi and G. Kallner, *Acta Medica Orientalia*, January, 1945.

The most important causes of death among the Palestine Moslems are diarrhoea (enteritis), pneumonia and senility. The most important causes of deaths among Jews are heart diseases, pneumonia, and cancer. Children's diseases are much less important as a cause of death among the Jewish community than they are in the United States or Western Europe: this record reflects the extraordinarily high level of child care. Malaria is no longer important as a cause of death, accounting for only about 1 death in every 1,000. Syphilis is even less important as a cause of death, and there are almost no deaths from acute alcoholism.

Tuberculosis is regarded as a serious problem, though it is only about half as important as a cause of death in Palestine as in the United Kingdom. There have been epidemics of typhoid, smallpox and plague.

Eye diseases are still extremely important among the Arab population. These and the diseases of digestion are the charactertic curses of the Arab Middle East. Even now, about half of the Arab school children are affected by trachoma. Trachoma is probably even more prevalent among the Arab non-school population. About

2 percent of all Jewish school children also have trachoma, these being principally the children of Oriental Jews, whose social condition is nearest to that of the Arab population.

LITERACY AND EDUCATION

In literacy, general education, and special training for modern economic activities—as in so many other things—Palestine is a country of two peoples. The Arab community is less than 30 percent literate; the Jewish is about 93 percent literate. Only about 45 percent of all Arab children ever attend school—for however short a period; nearly 100 percent of the Jewish children attend school for some time, though often only for a few years. The Arabs have little acquaintance with higher education and find it almost unattainable; in the Jewish community higher education is familiar and within reach.

The 1931 census of population gives the following picture of literacy.

PERCENTAGE OF LITERATE PERSONS
AGED 7 AND OVER, 1931

	Total	*Male*	*Female*
Moslems	14.4	25.1	3.3
Others	23.3	36.2	10.4
Christians	57.7	71.5	44.1
Jews	86.1	93.4	78.7

Source: *Palestine Census of 1931*, vol. I.

To evaluate this table properly, the weight of the Moslem element in the Arab population must be emphasized. Today Moslems are about eight times as numerous as Christians, and Moslem Arabs are about nine times as numerous as Christian Arabs. (The Christians who are not Arabs are the most literate element of the Christian group.) The Moslem record for Palestine in 1931 was very similar to that of other Middle East Moslem countries. Male Moslems in Egypt (1927) were only 20.3 percent literate and in Turkey (1927) only 17.4 percent literate.

In the years since 1931, though there has been no census, it is clear that literacy has increased. Yet it would be very generous to estimate that Arab literacy has doubled. As late as 1938-39 about half of all Arabs who applied for admission to Government schools were rejected. There were no school facilities to accommodate the applicants. Many Arab parents did not even think of applying because more than half the Arab villages had no school.

At all levels, the character of Palestinian education reflects the division into two peoples. No Hebrew is taught in Arab schools though some Arabic is taught in Jewish schools. The Arabs have no university in Palestine. The Jews have the Hebrew University in Jerusalem and the Hebrew Technical Institute in Haifa. At present the Hebrew University and the Technical Institute have no Arab students. Indeed it would be very difficult for Arabs to attend these institutions in considerable numbers even if there were no political conflict, since the language of instruction is Hebrew and few Arabs know Hebrew. The high scholarship and service of the Hebrew University and the Technical Institute are without question. Yet they serve directly only the Jewish people in Palestine and not both major peoples. An English University, which would have English as the language of instruction and would admit students from the whole Middle East—without distinction of nationality or creed—has been suggested many times, but the vision and drive required to bring it into being have been lacking.

The backwardness of Arab education in Palestine is most striking at the secondary and technical level, where it is most directly related to fitness for modern vocations. In 1942 there were only about 939 Arab children in Government secondary schools, compared with 4,973 Jewish children in Jewish secondary schools—though the Arab school-age population outnumbered the Jewish by about four to one. The Jews had over forty times as many (1,687) young people receiving special agricultural training and about fifteen times as many (886) in other secondary-level technical and vocational schools. Before their enrollment was cut by volunteering for war service, the Jews also had about 1,100 students at the Hebrew University and about 600 at the Haifa Technical Institute. There is no Arab counterpart to this Jewish education in Palestine.

The Arab population shows no lack of aptitude for modern education. They have not been discriminated against in Government educational expenditures. On the contrary, in recent years only about one-fifth of total Government educational expenditures has gone to the Jewish schools. But the Arab community has not been willing to burden itself as the Jewish has for educational purposes. The Moslem Arabs are particularly backward in this respect. They will not tax themselves to establish schools, and—despite the fact that there are many rich Moslems—they have no public philanthropy directed toward providing modern education. Few, if any, illiterate peoples are willing, of their own initiative, to make great sacrifices for education. The Arabs have consequently suffered because central Government educational outlays have not been adequate to the dimensions of the task of making them literate and providing them with the rudiments of modern education—without much active initiative on their own part. Palestine has not, under the Mandate, put forth an educational effort remotely comparable to those accomplished, for poor peoples, by the Governments of the U. S. S. R. and Japan during the same years. In 1937 a great British economist, A. C. Pigou, observed that ". . . the most important investment of all is investment in the health, intelligence and character of the people." With respect to the Arab people of Palestine, British administration has not yet undertaken to provide that investment.

OCCUPATIONS

In 1922 only about 35 percent of the population of Palestine lived in cities and towns of 5,000 or more. In 1942 the percentage had increased to 46—a substantial shift in two decades. The Moslems of Palestine remain a rural and agricultural people, while the Jews and Christians are more concentrated in industry, commerce, construction, professional and personal services, finance, and government. Only about 27 percent of Palestine's Moslems lived in urban communities in 1942, compared with 76 percent of her Jews and 78 percent of her Christians.

Even in 1942, when her wartime industrial expansion was well under way, almost half of Palestine's people were still employed in agriculture.

INDUSTRIAL DISTRIBUTION OF PALESTINE'S GAINFULLY EMPLOYED

	1931	*1939*	*1942*
Total Numbers	338,300	504,300	595,900
Agriculture	58.8%	56.4%	46.7%
Manufactures	10.2	10.8	11.8
Building	3.6	5.6	10.6
Commerce and Transport	12.6	12.3	11.1
Government	2.8	4.5	9.5
Other	12.0	10.4	10.3
TOTAL PERCENT	100.0	100.0	100.0

Sources: *Census of Palestine*, 1931, vol. II, and G. E. Wood, *Survey of National Income of Palestine*, 1943. The 1931 census data were adjusted to include the same proportion of female unpaid family workers as were included in 1939. The 1942 data do not include men serving in the armed forces.

In the years 1931-42, the industrial distribution of Palestine's labor force was not revolutionized. Although agriculture and commerce declined in relative importance, to the advantage of construction, government and industry, the basic pattern remained unchanged. The greatest changes took place from 1939 to 1942, under the influence of war demands. Even in 1942 Palestine was an agricultural country, by Western standards. Whereas in Palestine in 1942 nearly 47 percent of the gainfully employed were in agriculture, in England and Wales normally (1931) only 6 percent and in the United States normally (1940) only 19 percent of the gainfully employed were in agriculture.

While the occupations of the non-Jewish population have been studied comprehensively only in the census of 1931, the studies of the statistical staff of the Jewish Agency have made available much more up-to-date information on the economic activities of Jews. As shown in the table below, Palestine Jews in the 1930's had about the same percentage employed in agriculture as the United States. From 1939 to 1943 Jewish employment in agriculture declined. The decline was accounted for by the wartime distress of citriculture and the associated wartime requirements of increased employment in manufactures, government, and construction.

INDUSTRIAL DISTRIBUTION OF THE JEWISH GAINFULLY EMPLOYED

	1931	*1939*	*1943*
Total Numbers	66,700	192,000	212,000
Agriculture	18.4%	19.3%	13.2%
Manufactures	21.9	18.7	29.0
Building	7.6	7.3	9.2
Transport and Communication	5.0	4.7	3.8
Commerce and Finance	16.3	17.2	14.6
Professions	11.1	10.4	7.6
Clerical and Government	2.0	9.9	13.8
Domestic Service	5.1	7.3	6.0
Other	12.6	5.2	2.8
TOTAL PERCENT	100.0	100.0	100.0

Sources: D. Gurevich, A. Gertz, and R. Bachi, *The Jewish Population of Palestine*, 1944, and Jewish Agency, *Statistical Bulletin*, Aug.-Oct. 1942. The 1943 data do not include men in the armed forces.

GROWTH AND QUALITATIVE CHANGE

During the years from 1919 through 1944, the rate of population growth in Palestine has been greater than in any other country. Yet the growth was not great enough to accomplish the policy for which a Mandate over Palestine was entrusted to the British Government. That policy was the creation of a refuge and national home for the persecuted Jewish people. The greatest persecution in Jewish history took place in the years 1939-44. In those years, perhaps five and a half million Jewish poeple died in Europe. In those same years, under the political compulsions that were determinative with respect to British policy, only a few tens of thousands of Jews were allowed to enter Palestine. By the standards of its purpose and design, the population policy of the Mandate must be judged to have miscarried.

In health, cultural attainments and skill in modern economic activities, there has been some convergence between Palestine's two major peoples during the past quarter century. The Arabs are healthier and more literate and have greater proficiency in modern agriculture and industry than they had 25 years ago. But the difference between the two peoples is still profound. The Zionist is in principle a pioneer and innovator, with Western cultural and economic standards. He sets the greatest value on the education of his children. He studies the agricultural bulletins of foreign countries; his industry is ingenious and aggressively competitive. (Every foreman is planning to set up his own factory!) He has, in a measure, absorbed the American slogan, "Time is money." The Arab is still prone to be suspicious of all innovation. He rarely looks for foreign models and seldom follows any vocation other than his father's. He is generally a firm believer in the most typical proverb of the Middle East, "All hurry comes from the Devil."

The intensity and continuity of the conflict between the Arab and Jewish peoples in Palestine are often overestimated by foreigners, but their separateness is commonly underestimated. Their lives are cast in different molds. An accomplished Palestinian Jew, who is completely free of national chauvinism, can report that no Arab has been in his home for fifteen years: the barrier is even firmer in the other direction. Neither Arabs nor Jews regard themselves as "Palestinians" except in the most formal legal sense. Both regard themselves as fragments (in the Zionist case, the central fragment) of larger nations most of whose people live outside of Palestine.

CHAPTER 12

NATIONAL INCOME

PREWAR ECONOMY OF JEWS AND NON-JEWS

It is as misleading to refer to *the* Palestinian economy as it is to refer to *the* Palestinian population. The economic differences between the two communities are as great as the cultural differences described in the preceding chapter. Palestine comprises two distinct communities—with inter-relations, whether on the social or economic level, held at a minimum. This minimum intercourse was particularly marked between 1936-39, when there was sustained overt hostility between Arabs and Jews.

Perhaps the most fundamental contrast is the difference in the sources of the national income received by each community in the years preceding the war (Table 1). Agriculture, for example, provided less than one-tenth of the Jewish national income but nearly one-quarter of the national income of the non-Jews. While manufactures and handicrafts were twice as important as agriculture to the Jews, they were only half as important as agriculture to the non-Jews. The Jews received nearly 9 percent of their income from contract construction, compared with 2 percent for the non-Jews: this illustrates the sharp difference between the two communities in the tempo of growth. Equally striking is the large contrast in the role of finance. The more modern character of the Jewish community may be inferred also from the fact that about 7 percent of Jewish income originated in health, education and municipal services, but in the case of the non-Jews only 2 percent originated in these fields.

As much as one-fourth and one-fifth, respectively, of Jewish and non-Jewish income was derived from trade and motor transportation, which attests the dominance of the petty merchant in both economies. In an evaluation of the Government as a source of income, it is necessary to remember that the non-Jews cannot be identified completely as Arabs since a very substantial number are British Colonial Office officials or military personnel.

These differences may be made more pointed for a comparison with the industrial sources of national income in several other countries. To establish the broad differences, the categories of

TABLE 1: NATIONAL INCOME OF PALESTINE BY INDUSTRIAL SOURCE AND BY NATIONAL GROUPS, 1936

(*Thousands of £P*)

Industry	*National income of Palestine*	*Jews*			*Non-Jews*	*Percent of total national income*		
		National income	*Wages and salaries*	*Return to capital*		*Palestine total*	*Jews*	*Non-Jews*
1. National income	33,849	17,795			16,054	100	100	100
2. Agriculture	5,550	1,671			3,879	16.4	9.4	24.2
3. Electricity	490	432	190	242	58	1.4	2.4	.4
4. Manufacturing (incl. handicraft and mining)	5,399	3,477	2,791	686	1,922	16.0	19.5	12.0
5. Food	1,470	586	410	176	884	4.3	3.3	5.5
6. Textiles	257	145	117	28	112	.8	.8	.7
7. Clothing	307	277	236	41	30	.9	1.6	.2
8. Metal works	583	370	310	60	213	1.7	2.1	1.3
9. Machinery	165	165	142	23		.5	.9	
10. Woodwork	493	395	341	54	98	1.5	2.2	.6
11. Leather products	289	188	155	33	101	.8	1.1	.6
12. Printing and paper	411	324	267	57	87	1.2	1.8	.5
13. Chemicals	636	294	214	80	342	1.9	1.6	2.2
14. Stone and cement	532	492	393	99	40	1.6	2.8	.2
15. Electrical products	60	60	53	7		.2	.3	
16. Miscellaneous	196	181	153	28	15	.6	1.0	.1
17. Contract construction	1,871	1,557			314	5.5	8.7	2.0
18. Railroad transport	532	92	52	40	440	1.6	.5	2.7
19. Trade and other transportation	7,961	4,522			3,439	23.5	25.6	21.4
20. Motor transport		945	410	535			5.3	
21. Communications (incl. post offices)	274	107	75	32	167	.8	.6	1.0
22. Finance	1,699	1,414			285	5.0	7.9	1.8
23. Real estate (net rents incl. imputed rents)	3,444	2,104			1,340	10.2	11.8	8.3
24. Health and education (non-government)	905	727			178	2.7	4.1	1.1
25. Municipal services	635	489			146	1.9	2.7	.9
26. Other services	1,904	802			1,102	5.6	4.5	6.9
27. Mandatory Government	3,185	401			2,784	9.4	2.3	17.3
28. Public works	203	40	40		163	.6	.2	1.0
29. Administrative	2,982	361			2,621	8.8	2.1	16.3

Sources: See Notes and Acknowledgments to this chapter on page 644 *ff*.

"primary, secondary and tertiary" industries suggested by Colin Clark are useful. Primary industries include agriculture, forestry and fishing. Manufactures, contract construction and public works, mining and electric power production constitute the secondary industries. The tertiary industries comprise commerce and distribution, transport, domestic, personal and professional services, and public administration.

INDUSTRIAL SOURCES OF NATIONAL INCOME

Country and year	*Percentage of national income originating in—* *Primary industries*	*Secondary industries*	*Tertiary industries*
Palestine, 1936	16.4	23.5	60.1
Jews	9.4	30.8	59.8
Non-Jews	24.2	15.4	60.4
United States, 1935	9.4	26.8	63.8
Great Britain, 1930	3.7	45.2	51.1
Italy, 1928	33.3	35.6	31.1
Sweden, 1930	13.5	48.5	38.0
Australia, 1935-36	26.8	22.8	50.4
Japan, 1934	13.4	29.2	57.4

Source: For all countries except Palestine, Colin Clark, *Conditions of Economic Progress*, Macmillan & Co., London, 1940, Chap. X.

In terms of the broad industrial pattern of income receipts, Jewish Palestine resembles the more highly industrialized countries, particularly the United States and Japan. Non-Jewish Palestine, on the other hand, has a rather unique pattern resembling neither the predominantly agricultural countries such as Italy and Australia with respect to the relative importance of the secondary and tertiary industries, nor the highly industrialized countries with respect to the primary and secondary groups.

The generalization has been ventured that the rise in real per capita income has been dependent upon the shift of resources engaged in primary industries to those in the secondary and tertiary groups. The validity of the generalization, in so far as it relates to a *trend,* cannot be tested for Palestine since the requisite data are not available for a sufficient number of years. For our reference year, however, the proposition is valid as between the two Palestinian economies. This is supported by the fact that the non-Jewish population (excluding in this instance the British employed in the Government and the army) had an income per person engaged in economic activity only about one-half that of the Jewish population. This income differential results, however, not merely from the greater concentration of the non-Jewish labor force in agriculture, which yielded the lowest per capita income of all industries, but also from the fact that the income per non-Jewish employe was lower than the income per Jewish employe in every industrial group except the services. (The latter exception is explained by the disproportionately large number of Arabs employed in the Government service.) Jews were much more productive than Arabs in the *same* occupations as well as being more concentrated in the high-income-yielding occupations.

PER CAPITA INCOME IN PALESTINE, BY OCCUPATIONS AND NATIONAL GROUPS, 1936

	Jews			*Non-Jews*		
Industry	*Gainfully occupied (1,000 persons)*	*National income (£P 1,000)*	*National income per gainfully occupied person (£P)*	*Gainfully occupied (1,000 persons)*	*National income (£P 1,000)*	*National income per gainfully occupied person (£P)*
Agriculture	32	1,671	52	162	3,879	24
Manufactures and handicrafts	30	3,909	130	22	1,980	90
Contract construction	14	1,557	111	8	314	39
Commerce and transport	32	4,522	141	32	3,439	107
Others	63	6,136	97	37	4,928	133
All industries	171	17,795	104	261	14,540	56

Source: See Notes and Acknowledgments to this chapter. The population figures are those used by Gruenbaum, *op. cit.*, table 13, p. 32. National income figures are our adaptation of Gruenbaum's estimate.

These data indicate that the Zionist effort to place an ever larger number of Jews on the land must be motivated by political or social considerations rather than by the economic objective of maximizing per capita income. The realization that agriculture yields the lowest per capita income of all industries has led some of the agricultural settlements to establish factories in their settlements, or to engage in trucking, or to encourage certain of their members to seek non-agricultural employment outside the settlement.

The large differences between the Arabs and the Jews in income per engaged person naturally carry over into the per capita incomes of the two communities. Excluding the income received by British persons in the Government and army, the per capita income of the non-Jews was £P 17, and for the Jews £P 44. The difference expressed in terms of nominal income exaggerates the difference in real income because prices in Jewish markets were about 30-35 percent higher in 1936 than in Arab markets. From scattered evidence it would appear that the Palestinian Arab was about as well off in terms of per capita national income as the Cyprians and Turks and enjoyed a considerable advantage over the Egyptians, Syrians, and

Iraqians. Other international comparisons would be most misleading due to differences in consumption habits and price levels.

TABLE 2: VALUE OF CONSUMER EXPENDITURES AND THEIR RELATIVE DISTRIBUTION, BY TYPE OF EXPENDITURE AND BY NATIONAL GROUPS, 1936

	Value of expenditure (Thousands of £P)			*Percent distribution of total **		
Type of expenditure	*Palestine*	*Jews*	*Non-Jews*	*Palestine*	*Jews*	*Non-Jews*
CONSUMERS' GOODS AND SERVICES (at market price)	36,499	19,920	16,579	100.0	100.0	100.0
Non-durable goods:						
Foodstuffs, tobacco beverages	15,458	7,317	8,141	41.8	36.4	48.3
Clothing, footwear	2,613	1,737	876	7.1	8.6	5.3
Other goods	4,001	2,497	1,504	10.8	12.4	9.0
Durable goods:						
Depreciation of household equipment	430	250	180	1.2	1.2	1.1
Housing	4,859	3,469	1,390	13.2	17.2	8.5
Services:						
Private						
Education	435	382	53	1.2	1.9	.3
Health	720	520	200	1.9	2.6	1.2
Life insurance	425	340	85	1.2	1.7	.5
Other services	1,900	1,100	800	5.1	5.5	4.8
Foreign travel	780	426	354	2.1	2.1	2.1
Governmental						
Education	238	49	189	.7	.3	1.2
Health	194	21	173	.6	.1	1.1
Municipal services	635	489	146	1.9	2.7	.9
Other government services	3,811	1,323	2,488	11.2	7.3	15.7
LESS INDIRECT TAXES	2,537	1,757	780			
CONSUMERS' GOODS AND SERVICES MINUS INDIRECT TAXES (i. e., at factor costs)	33,962	18,163	15,799			
NATIONAL INCOME	33,849	17,795	16,054			
NET SAVINGS OR DISSAVINGS (−)	−113	−368	255			

Source: Adapted from Gruenbaum's estimates, *op. cit.*, Table 17. See technical appendix for modifications. * The indirect taxes have been deducted from private expenditures according to their value, for the purpose of this computation.

The estimates of consumers' expenditures (Table 2) reflect the differences in standards of living between Jews and non-Jews that could have been anticipated from the differences in the income figures. Thus, the proposition that the lower the income the higher the percentage of total income spent on food and the lower the relative amounts expended on housing is supported by the statistics of consumers' outlay in Palestine. The Jewish community expended slightly more than one-third of all its consumers' outlay on food, compared to nearly one-half by the non-Jewish community. Even more noteworthy are the relative differences in housing expenditures, with the Jewish outlay representing more than one-sixth and the non-Jewish outlay amounting to only one-twelfth of their respective totals. Significant also is the fact that expenditures by Jews on private education, health and life insurance comprised 6 percent of the total, while for the non-Jews the comparable percentage was 2. In these estimates government service, other than education, health and municipal services, is allocated between the two communities for the most part on the basis of population.

The difference in the living standards becomes even more striking by expressing the respective expenditures of the two communities on a per capita basis.

STANDARD OF LIVING OF JEWS AND NON-JEWS

Type of expenditure	*Per capita expenditure (in £P)* *Jews*	*Non-Jews*	*Ratio of Jewish expenditures to non-Jewish*
Foodstuffs, etc.	16.5	7.9	209
Clothing and footwear	3.9	.9	433
Other non-durable goods	5.6	1.5	373
Depreciation of household equipment	.6	.2	300
Housing	7.8	1.4	557
Private services	6.2	1.5	413
Government services	4.7	3.1	152

Source: See Notes and Acknowledgments. Following Gruenbaum's figures, the Jewish population is taken as 400,000 and the non-Jewish at 967,000.

In no category of consumption except government services was the Jewish per capita outlay less than twice the per capita expenditures of the non-Jews. The comparison would remain impressive even if the Jewish expenditures were deflated by about one-third for the higher prices prevailing in the Jewish markets. For such distinctively modern services as health and education the Jews spent respectively 3.5 times and 4.3 times as much per capita as did non-Jews.

An international comparison of the relative distribution of consumers' expenditures by kind of consumption holds fewer dangers than a similar comparison of money incomes—a type of comparison that has been avoided. The former comparison serves to reenforce the observation that the Jewish community resembles the more advanced countries of the Western World not only in its pattern of income source but also in its consumption pattern. Similarly, the non-Jewish community, both in its production and consumption, resembles those countries in which the economy is dominated by peasant agriculture.

The comparison of the estimate of consumer expenditures with the estimate of national income discloses a significant characteristic of Palestine's prewar economy. If there were no errors of estimate the difference would represent savings when income exceeds expenditure and dissavings, or capital consumption, when expenditures exceed income. The estimates are too rough to give any importance to the exact magnitude of the difference. However, the estimates tend to indicate that the Jewish economy consumed some of its capital, while the non-Jewish economy was able to add to its stock of wealth. These differences were probably typical of most of the prewar years, particularly the years in which there was relatively large immigration of Jews, who would consume more than they would produce pending their absorption into the economy.

PERCENT DISTRIBUTION OF CONSUMERS' EXPENDITURES, BY MAJOR CATEGORIES, PALESTINE AND SELECTED COUNTRIES

Country and year	*Food*	*Clothing*	*Housing*	*Other Consumption*
Palestine, 1936				
Jews	35–40	9–10	17–19	39–31
Non-Jews	50–58	5–6	8–10	37–26
China, Peking, 1926-27	72.2	6.8	8.0	13.2
India, 1926	57.9	9.5	12.9	19.7
Poland, 1929	58.4	17.0	7.6	17.0
Germany, 1927	46.3	13.0	14.2	26.5
England, 1932	43	9	17	31
U. S. A., 1936	32	12	13	43

Source: Gruenbaum, Ludwig, *op. cit.*, p. 45, for all figures except U. S. A., which were taken from "Consumption Expenditures, 1929-43" by Wm. H. Shaw, and published in the *Survey of Current Business*, June 1944.

Under this condition, the expansion of the Jewish economy could have been accomplished only by the importation of capital. Dr. L. Gruenbaum has attempted an estimate of the magnitude of investment for 1936 (Table 3). New investment, according to this estimate, amounted to £P 10,197,000, or 30 percent of the national income total, and this in a post-boom year. More than four-fifths of the total new investment accrued to the Jewish sector of the economy. Half of the total invested in the non-Jewish economy was attributable to new investment by the Government, which is apportioned by Gruenbaum to the two communities according to the benefits received from the actual investments involved.

The differential rate of capital accumulation in the two economies may be expressed still another way. In the Jewish sphere new investment amounted to 47 percent of national income compared to 12 percent in the non-Jewish sphere. The intensity of capital development in the Jewish economy may be underscored by comparing it with Australia, a young and dynamic country, where in the fiscal year 1936-37 new investment equalled 23 percent of its national income.

Among the Jews, more than half of the new capital investment occurred in the building industry, presumably in response in large part to the 8 percent increase in its population over the preceding year, as well as in response to unfilled demands remaining from the unprecedentedly large immigration in the years 1933-35.

TABLE 3: VALUE OF NET INCREASE IN WEALTH AND RELATIVE DISTRIBUTION BY INDUSTRY AND NATIONAL GROUPS, 1936

	Value of net increase in wealth (Thousands of £P)			*Percent distribution of total*		
Source of increase	*Palestine*	*Jews*	*Non-Jews*	*Palestine*	*Jews*	*Non-Jews*
TOTAL NEW INVESTMENT	10,197	8,327	1,870	100.0	100.0	100.0
Agriculture	1,084	507	577	11.0	6.0	31.0
Manufacturing, etc.	896	916	−20	9.0	11.0	−1.0
Import—Total	2,898	2,694	204	28.0	32.0	11.0
Machinery	555			5.0		
Agricultural equipment	474			5.0		
Transport equipment	524			5.0		
Other	1,345			13.0		
Building industry	5,043	4,286	757	50.0	52.0	40.0
Government	1,595	624	971	15.0	7.0	52.0
Depreciation of						
Transport equipment	−889	−609	−280	−9.0	−7.0	−15.0
Household equipment	−430	−250	−180	−4.0	−3.0	−10.0
Land transactions		159	−159		2.0	−8.5

Sources: Gruenbaum's estimates, *op. cit.*, Table 28, except for estimates of imports of machinery, agricultural equipment and transportation equipment, which are taken from D. Horowitz and R. Hinden, *Economic Survey of Palestine, with Special Reference to the Years 1936 and 1937*, p. 126.

Local manufacturers originated but 11 percent of the new investment. Imported commodities, on the other hand, accounted for 32 percent of all Jewish capital formation. Of the imported total, over one-half consisted of industrial machinery, agricultural equipment and transportation equipment. Much of the remainder was composed of household equipment brought in by the immigrants. The new agricultural investment, amounting to 6 percent of the total Jewish investment, represents only appreciation and extension of orchards and expansion of livestock. New agricultural buildings, for example, are considered as new investment originating in the building industry.

In the non-Jewish sphere of private activity, new investment was concentrated in agriculture and building, which traditionally have been the major fields of Arab investment activity.

This cross-sectional analysis has revealed the Jewish economy both in its sources of income and consumption habits as already in 1936 developing the characteristics of the more advanced countries of the Western World. That the pace of development was a relatively rapid one is indicated by the high rate of new investment. This is in sharp contrast to the Arab economy, which was only in the early stages of transition from a backward, unprogressive agricultural economy. The resulting differences in standards of living of the two communities were bound to be pronounced although the Palestinian Arabs enjoyed a substantially higher standard than that of Arabs in neighboring countries.

IMPACT OF WORLD WAR II ON NATIONAL INCOME

The initial impact of the war had a dislocating effect upon Palestine's economy,* reaching serious proportions in the summer of 1940 when the Mediterranean was closed to shipping by Italy's belligerency. Thus cut off both from many of its sources of supply and markets, the economy was permitted to languish until the latter part of 1941, when serious efforts were made to mobilize the Palestinian economy in support of the United Nations. The resulting injection of relatively large expenditures by the military, coupled with a virtual embargo on foreign competition in the domestic market, transformed a depression into a boom by 1942.

To be sure, much of the boom, as will be shown at another point, was illusory. As measured in terms of national income in current prices, however, its existence cannot be denied and is fully confirmed by the statistics of Table 4. Thus national income in 1942 was estimated at slightly more than £P 75 millions, and at £P 90 millions in 1943, an increase of about 150 and 200 percent, respectively, over 1939. For 1944 our own estimates indicate a national income of £P 105-110 millions.

The mobilization for war and the inflationary factors were bound to alter significantly the prewar pattern of sources of national income. The national income originating in commodity production, transport, and military services increased at a greater rate than did the national income aggregate. The prosecution of the war required commodities and their transportation rather than commercial, financial, personal, professional, or governmental services.

In the commodity-producing groups it was not until 1943 that the expansion of manufactures overtook the expansion in agriculture,* with both registering gains of 250 percent or more. The agricultural expansion was accomplished despite the drastic decline in the output and marketing of citrus fruit. Unfortunately the net expansion (when account is taken of the contraction in citrus) was compounded out of nine parts inflated prices and only one part increase in real agricultural output.

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* Despite our previous observation that more is concealed than is revealed by reference to the Palestinian economy as an entity, for the war years it is necessary to refer to this entity, since the available national income estimates cover the entire economy without a breakdown by Jews and non-Jews.

TABLE 4: THE NATIONAL INCOME OF PALESTINE, 1939, 1942 AND 1943

	National income (Millions of £P)					Percent increase over 1939	
Industry groups	*1939*		*1942*		*1943*	*1942*	*1943*
National income		30.04		75.89	90.00	153	200
Agriculture, fisheries and forests		5.74		18.51	20.20	222	252
Mfg., mining and private utilities		5.97		14.72	21.70	147	263
Food and tobacco products	2.22		4.62			107	
Textile products	.29		.97			234	
Clothing	.44		1.35			207	
Metal products	.65		2.25			246	
Wood products	.30		.43			43	
Leather products	.06		.36			500	
Printing and paper products	.15		.29			93	
Chemical products	.46		.99			115	
Stone and cement products	.47		.84			79	
Miscellaneous manufactures	.08		1.52			1800	
Electric and water supply (private)	.85		1.10			29	
Contract building and construction		1.84		5.82	5.70	216	210
Housing (including imputed net rents)		3.40		4.25	4.80	25	41
Transport and communication		1.78		6.97	6.80	292	282
Motor transportation	.90		5.00			456	
Railroad transportation	.20		1.15			475	
Shipping and aviation	.25		.30			20	
Telephone, telegraph and postal services	.43		.52			21	
Commerce and finance		4.59		9.33	11.00	103	140
Commerce	3.69		6.93			88	
Finance	.90		2.40			167	
Hotel, restaurant and domestic service		1.50		2.50	3.00	67	100
Other services		1.75		7.98	9.60	357	449
Educational, medical and legal services (private)	1.02		1.40			37	
Other services	.73		6.58			801	
Government		3.47		5.81	7.20	67	107
Mandatory	2.48		4.50			81	
Municipal and local	.99		1.31			32	

Source: For 1939 and 1942, *Survey of National Income of Palestine* by G. E. Wood and for 1943, *General Bulletin,* August 1944, pp. 342-45. For minor adjustments in Finance, see technical appendix to this Chapter.

In manufactures the broadest advances, at least by 1942, were made in diamond cutting and polishing (included in miscellaneous manufactures), in leather goods, metal and machinery products, textiles and clothing. The sharp curtailment in private building is reflected in the relatively smaller increases in stone and cement and wood products while the paper shortage accounts for the comparatively restricted gains in printing and paper products. Unlike agriculture, where the decline in citrus largely offset other expansion, the capacity and output of manufacturers expanded very substantially during the war years. Thus man-days worked in Jewish-owned factories increased by 115 percent between 1939 and 1943. With allowance for some loss of efficiency and for the fact that the Arab sector has not expanded at as great a rate, real output in manufactures may be estimated to have doubled in volume. A measure of the inflationary effect upon the prices of manufactures is provided by the comparison of a rise of 100 percent in real output with a rise of 260 percent measured in current prices.

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* This may be more statistical than real since there is evidence of considerable under-reporting both in the Jewish and Arab farm economies in order to avoid detection of diversion of output to the black market.

The two-fold gain in the value of contract construction achieved by 1942 is not quite as impressive as appears on the surface. Aside from the price inflation it also reflects the fact that the level of construction activity in 1939 was much below the average of the 1930's. A major proportion of all construction during the war years was performed for the military authorities.

It was also the military demands for movement of personnel and supplies that were chiefly responsible for the nearly five-fold increase in income originating in motor and rail transport. Here too price rises were much more important than expansion of service. The indicators of traffic volume handled show much more moderate, although still sizable, gains, e.g., a 60 percent increase between 1939 and 1942 in passengers carried by motor transport and 182 percent increase in ton-kilometers of rail freight.

The smallest relative gains occurred in those economic areas where price control was long accepted, as in public utilities, or where control was imposed at the outset of war, as in housing, or in the spheres of governmental or quasi-governmental activity. Because of the much more rigorous control over prices in these fields, a much larger proportion of the total rise in income was due to expansion of real output.

Still another indication that there were real gains—though of a much smaller order of magnitude than the gains expressed in monetary terms—is the fact that the labor force, excluding members of the armed services, increased by as much as 18 percent between 1939 and 1942; if measured in man-hours, the expansion would have been somewhat larger. These differential rates in the expansion of the labor force and in the national income point to the major source of the inflationary pressure. The resulting incomes per gainfully occupied person and per wage earner are set forth in Table 5.

Not only was there a very substantial addition to the number of wage recipients, but each recipient on the average received 78 percent more in 1942 than in 1939. This swelling of the income stream occurred at the very time of an acute shrinkage in civilian supplies. According to the Government Statistician, the volume of goods and services available for civilian consumption was 15 to 20 percent below the 1939 level.

Also contributing to the surplus of purchasing power were the greatly augmented returns for the use of property. Their inflationary effect was somewhat less than that of labor income, not only because a smaller proportion of property income is normally spent on consumers' goods, but also because the increase of 134 percent over 1939 was less than the increase of 169 percent for labor income. The combined effect of these highly inflated returns, both labor and property, are reflected, of course, in the rise of per capita national income from £P 20.5 in 1939 to £P 49.4 in 1942, an increase of 141 percent. In the following year the per capita national income reached £P 54.9, a gain of 11 percent over 1942.

TABLE 5: NATIONAL INCOME PER GAINFULLY OCCUPIED PERSON AND EARNINGS PER WAGE EARNER, 1939 AND 1942

	National income per gainfully occupied person		*Percent increase*	*Earnings per wage earner*		*Percent increase*
Source of income	*1939 £P*	*1942 £P*	*1939 to 1942*	*1939 £P*	*1942 £P*	*1939 to 1942*
Agriculture	19.7	64.1	225	43	150	248
Mining and quarrying	139.5	234.0	68	87	184	112
Manufacturing and privately owned public utilities	107.4	206.4	92	59	122	107
Building and construction	65.7	92.4	41	60	85	42
Wages and salaries of civilian employees of the War Dept., excluding construction		133.2			133	
Pay and allowances of Palestinian soldiers		94.3			94	
Transport and communications	85.6	296.6	246	81	262	223
Commerce and finance	110.6	218.5	98	82	132	61
Services of Government Dept. and local governing authorities	165.2	184.4	12	142	167	18
Hotels, restaurants, personal and domestic service	50.0	71.3	43	39	52	33
Other services	71.7	100.0	39	69	103	49
TOTAL ABOVE GROUPS	53.1	113.8	114	68	121	78

Source: G. E. Wood, *op. cit.*, Tables 8 and 10. The industrial classifications are not identical with those in Table 4 because there is insufficient detail on numbers gainfully occupied by industry.

The possibility that these inflationary forces would be called into being does not seem to have been fully understood by the

Palestinian Government. Even if effective price control and high personal income taxes had been introduced at the beginning of the war, the rise in the price level would have been substantial in response to the increased cost of overseas imports occasioned by the very expensive transportation through belligerent waters as well as by the imports from high-cost neighboring countries, themselves in the throes of inflation. These inherent tendencies, however, were given free rein by the delay in introducing effective techniques of wage stabilization, food subsidies and direct taxation. It was not until mid-1943, when the wholesale price index reached 339 and the cost-of-living index 247 (both on August 1939 base), that price stabilization was achieved.

TABLE 6: NATIONAL OUTLAY AND NATIONAL INCOME IN CURRENT PRICES, 1939, 1942, AND 1943

(*Millions of £P*)

	1939	*1942*	*1943*
1. Value, including freight, of net imports (i. e., imports minus exports excluding Government imports)	6.5	15.0	13.0
2. Net value at producers prices of goods produced in Palestine for civilian use during the year	14.5	23.0	31.0
3. Value of services consumed by the civilian population (excluding Government services)	13.0	17.0	22.0
4. Government expenditure on goods and services [a]	5.0	8.1	11.0
5. Total expenditure on goods and services at factor costs	39.0	63.1	77.0
6. Differences between national income and national outlay	−9.0	12.8	13.0
7. National income	30.0	75.9	90.0

Source: Wood, *op. cit.*, Table I for 1939 and 1942. For 1943, figures taken from *General Bulletin*, August 1944, p. 343. The breakdown between (1) and (2) for 1943 is our own estimate.

[a] Excluding post office, railways and public works expenditures and Government subsidies on sale of foodstuffs, etc., all included elsewhere in (1), (2) and (3) above.

Unfortunately, estimates of national outlay for the war years must be cast in the statistical categories available rather than in categories that would be most meaningful for welfare purposes. Nevertheless, the outlay estimates in their present form (Table 6) serve at least two useful purposes. One is the important disclosure that in each year, 1942 and 1943, the total economy effected savings of £P 13 million compared with dissavings of £P 9 million in 1939. Apart from this saving out of current income, Palestine has saved the whole of the capital that has come into the country in these years. The savings have been largely in the form of sterling balances in London. Thus, as foreshadowed by the net inward flow of dividends and interest payments, Palestine has been transformed by the war from a debtor economy on capital account to a creditor economy. There is no reason, however, to regard this as a structural change. Rather it must be viewed as a temporary condition imposed by the wartime shortage of capital goods, depletion of inventories, and increased foreign contributions to the various Jewish national funds.

The national outlay estimates serve also as a basis for the deflation of the national income total. In certain cases it has been possible to indicate the approximate effect of the price rise on the national income originating in the specified industries. To gauge, however, the effect of the war on Palestine's economic potential, the price distortion must be eliminated systematically and as completely as possible. This can be accomplished with moderate accuracy by expressing each component of the national outlay and the volume of savings in 1939 prices* (Table 7). In real terms the civilian expenditures on goods and services had not yet attained the prewar level by 1943. The deficiency, amounting to 25 percent, was most notable in expenditures on goods. Some idea of the seriousness of the goods shortage, particularly foodstuffs, when warfare was still active in the Mediterranean, may be gained from a study prepared by the Palestine Economic Society of the per capita food consumption of the Jewish urban population.

PER CAPITA FOOD CONSUMPTION OF JEWISH URBAN POPULATION
(*in kilograms*)

	1936-39	*1941-42*
Bread and other cereals	158.5	169
Potatoes	60	25
Meat	23	11.5
Fish	7.5	4.2
Poultry	5	3.5†
Eggs	250	145
Margarine and vegetable oils	13	16.5
Butter	5	2
Fresh milk, cream, leben (litres)	50	70
Condensed milk (litres; in terms of fresh milk)	6	negligible
Whole cheese (low in fat)	1.5	2.5
Fat cheese	1.5	.5
Fresh vegetables	50	70
Sugar	20	8.5

Source: Unpublished study sponsored by the Palestine Economic Society.
†Actually much lower, due to poultry consumption by soldiers in restaurants.

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* Those who hold with Simon Kuznets (see *National Product War and Prewar*, Occasional Paper 17, Feb. 1944, National Bureau of Economic Research, and *Treatment of War Production in National Product* submitted to the Conference on Research in Income and Wealth, April 1944) would reject this approach to the deflation problem. In their view whenever there is a drastic change in the composition of goods and services the more logical deflation procedure is the deflation of the returns to each factor of production. It is not necessary for us to enter into the merits of the controversy. In the case of Palestine it is sufficient to point out that the composition of the goods and services consumed was not drastically altered since Palestinian industry did not produce armaments of any consequence. The important change consisted in the domestic manufacture of many articles formerly imported.

This table indicates striking declines in urban consumption of potatoes, meat, fish, poultry, eggs, butter and sugar, accompanied by more modest increases in bread, fresh milk, and fresh vegetables. Both the quality and quantity of the diet have obviously deteriorated greatly during the war, especially in the earlier years. Although there are no quantitative data at hand, from our personal observation we judge that much the same degree of deterioration has characterized standards in clothing and housing. Since building of houses has been severely curtailed, overcrowding has become worse.

On the other hand, the income-producing capacity of the country as measured by real national income was one-third larger in 1943 than in 1939. On a per capita basis the increase was about one-fifth, which is a considerable achievement for a 4-year period characterized by scarcity of both capital goods and manpower.

TABLE 7: NATIONAL INCOME IN 1939, 1942 AND 1943 EXPRESSED IN 1939 PRICES

(*Millions of £P*)

	National income in 1939 prices		
	1939	*1942*	*1943*
1. Value, including freight, of net imports (i. e., imports minus exports excluding Government imports)	6.5	6.0	4.0
2. Net value at producers prices of goods produced in Palestine for civilian use during the year	14.5	8.0	11.0
3. Value of services consumed by the civilian population (excluding Government services)	13.0	11.0	12.0
4. Government expenditure on goods and services at factor costs	5.0	8.0	9.0
5. Total expenditure on goods and services at factor costs	39.0	33.0	36.0
6. Difference between national income and national outlay	−9.0	5.0	4.0
7. National income	30.0	38.0	40.0

Source: See technical appendix to this chapter.

From the official estimates it is impossible to determine with exactness the relative shares of Jews and non-Jews in the wartime national income of Palestine. There are, however, certain clues. In the field of agriculture, for example, the gross income from cereals, which has constituted from one-quarter to one-third of the value of Arab agriculture, excluding citrus, increased by 323 percent between 1939 and 1942. The gross income from all other branches of agriculture, constituting the major farming pursuits of the Jews, increased by only 153 percent. Although the losses in citriculture were about evenly divided between the Jews and non-Jews, the losses nonetheless bore more heavily upon Jewish agriculture since in the prewar years the value of Jewish citrus production comprised 61 percent of Jewish agricultural production but only 31 percent of non-Jewish agricultural output. Arab agriculture, moreover, is carried on in virtually self-contained units in contrast to most Jewish farming which must purchase much of its supplies in the open markets. Accordingly, it would appear that the Arab farming community in wartime received a larger fraction of the national income from agriculture than it did in peacetime.

In manufactures, the reverse has been the case. For this industry in 1942, G. E. Wood made separate estimates of the net output of Jewish-owned and the non-Jewish-owned manufactures. According to his estimates, the net output in the Jewish sector expanded by 201 percent and in the non-Jewish sector, including such foreign-owned companies as the Consolidated Refineries, by only 77 percent.

The other area of large expansion occurred in the activities of the War Department in connection with its building and construction, workshops, ordnance stores, and the like. Jobs in these fields apparently were filled by non-Jews in numbers larger than their weight in the total population.

These considerations suggest that the share of national income in current prices going to the non-Jews in 1942 was certainly no less than in the prewar years. Beginning with 1943 the Jewish share probably has increased somewhat since the national income originating in manufactures continued to expand at a greater rate than did income in agriculture. In terms of real national income, however, the non-Jewish share probably has been increased since the cost-of-living has risen less in the rural areas where 73 percent of the Moslems reside than in the urban areas where 70 percent of the Jews live.*

Not unexpectedly, then, the war's impact upon the Palestinian economy has been a mixed affair. It has made her temporarily a creditor country. It has brought distress to citriculture and prosperity to other agriculture. Among its more enduring benefits is the very decided fillip imparted to manufactures, in which field development must continue at greater than the prewar rates if immigrants are to be absorbed and the standard of living raised. But also part of the war's economic legacy to Palestine is a seriously inflated cost structure which will aggravate the difficulties of further expansion of the national income.

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* The text statement in terms of nominal national income is supported by the estimates of Ludwig Gruenbaum for 1936 and 1942, the latter being tentative and in summary form only. These figures show the non-Jews receiving 44 percent of the total in each of the two years. The estimate for 1942 is unpublished and was supplied by the author.

CHAPTER 13

WATER, FUEL AND POWER

WATER

Water supply is at present the most important natural limitation on the ability of Palestine to absorb large numbers of new immigrants. As previously noted, there is no lack of water in the country. But the poor distribution of rainfall in time and area limits its effective use. Due to the maldistribution of water resources, the country needs an integrated irrigation program for conserving water in areas where it abounds and is going to waste and delivering it to other areas where and when it is needed.

The water for this purpose lies in the rivers, springs, and underground water bodies. The three rivers are: the Jordan and its tributaries, the Hasbani, Liddani, and Banyas; the Yarmuk, a tributary of the Jordan flowing only partly in Palestine; and the Yarkon (also called the Auja), a small river to the north of Tel Aviv which is under concession to the Palestine Electric Corporation. The Jordan is the largest river, having, according to government estimates, a flow of over 1 billion cubic meters per year at Allenby Bridge, a few miles north of the Dead Sea. Parts of this river are also under concession to the Palestine Electric Corporation. Local streams and springs are numerous near the source of the Jordan, in the Beisan Plain, the Jordan Valley, and in the Samarian and Judean hills. Water can be obtained also from wadis (the normally dry water-courses which fill up during overflow or floods) and from underground or percolated sources. At the present time underground percolation is the main source of water for irrigation.

In addition to these sources within the country, the Litani River, which flows entirely outside Palestine in the Lebanon, is also an important potential source of irrigation water. Before any part of the Litani waters can be made available for use in Palestine, however, an agreement must be made between the governments of the Lebanon and Palestine.

The best current estimate of rainfall available for exploitation in Palestine is the report prepared by the Water Research Bureau of the Jewish Agency and the Jewish National Fund in 1942. This is a revision of a prevous study made by the Jewish National Fund in 1936. In making this estimate the Water Research Bureau used a rainfall map covering a 30-year period (1901-30) prepared by the Department of Civil Aviation of the Palestine Government in cooperation with Dr. Ashbel of the Hebrew University. According to this estimate, average annual rainfall in Palestine, including the area draining into the Huleh but outside the Mandate, amounts to 8,297 million cubic meters per year. This covers only areas receiving rainfall of 250 mm. or more. To this should be added 466 million cubic meters, the annual flow of the Yarmuk (carrying waters originating outside Palestine) where it joins the Jordan. Of this total of 8,763 million cubic meters, the Bureau suggests that 2,814 million, or more than one-third, is available for exploitation. The exploitable water is divided as follows:

EXPLOITABLE RAINFALL
(Millions of cubic meters)

Underground sources, summer flow of Jordan and tributaries,* and fresh spring water in the summer season	1,659
Run-off (of which Yarkon is 130 m.c.m.)	1,050
Spring water in winter season	105
TOTAL	2,814

Source: *Water Survey of Palestine, 1942.* Water Research Bureau of the Jewish Agency for Palestine (unpublished).

*Presumably includes part of the Yarmuk (about 130 m.c.m.).

These figures are based on very few actual measurements. There has never been a comprehensive hydrographic or geological survey of Palestine which could be used for a general plan of irrigation. Both underground (percolated) water and surface water were estimated on the basis of data available for countries similar to Palestine geographically and climatically. In determining underground water, it was assumed that 30 percent of the total quantity of rainfall percolates into the soil. This is the generally accepted figure on percolation in Palestine. Of the percolated water, it was assumed that 75 percent is available for exploitation in areas draining to the Mediterranean and 85 percent in areas draining to the Jordan. Some of the percolated water sinks too deeply to be reached, while if all of the attainable supply were drawn, the water table would be lowered and salt water would seep into the sweet.

The estimates of run-off are based on surveys in limited areas and, according to the Bureau, must be taken with caution. Run-off was calculated only for rainfall in hilly country. It was estimated that run-off water could be exploited to the extent of 45 percent for 250 mm. rainfall up to 60 percent for 1000 mm. rainfall. The

Office of the Water Commissioner has made several measurements of run-off in individual wadis which tend to show that these estimates of exploitable run-off water may be much too high. The evaluation of both run-off and underground water remains highly conjectural.

If arrangements are made for the Litani to be used in Palestine, its waste water alone (about 500 m.c.m.) would raise the total exploitable water supply in Palestine from 2814 million cubic meters to over 3300 million cubic meters per year. Other estimates of the total range from as little as 2 billion cubic meters per year to as much as 4 billion cubic meters. In view of the uncertainty of the estimates of run-off and underground water, the 3 billion figure offers a convenient mean for the extreme estimates of exploitable water in Palestine.

As compared with the country's potential, at the present time approximately 250 to 300 million cubic meters of water per year are being used for irrigation, or at most 10 percent of the amount that could be developed for exploitation.

The Government of Palestine has done little to further the research required on this basic aspect of the absorptive capacity of Palestine. In 1937 the Government appropriated £P 80,000 to be devoted to the investigation of the possibilities for irrigation in the Negeb and the Jordan Valley. Government experts have also been engaged in obtaining rainfall estimates, and in making some measurements of water flow in rivers and wadis, but the scale of their work has been pitifully small. In 1939-40 the budget of the Government Irrigation Service amounted to £P 2,375, of which £P 275 was for actual irrigation work, experiments, and investigations. Even in 1943-44, when there had been a wartime revival of irrigation work of which the Government of Palestine was very proud, only £P 12,420 was spent on the Irrigation Service—$50,000 in nominal value, worth perhaps half that much in real purchasing power.

Perhaps the report of the official 1940 Commission on Development and Welfare best reflects the attitude of the Government on this subject. The report proposes that in the postwar period the use of spring water be rationalized, that the Huleh swamp and the malarial swamps near Acre, those north of Nablus, and on the coastal plain be drained, and that a hydrographic survey be carried out. It hastily adds, however, that the program must not be too ambitious, since nothing has been done in the past and much data in connection with rainfall, run-off, discharges, and the like have still to be collected before some of the projects mentioned can be executed.

This inactivity of the Government of Palestine in constructive irrigation work is a striking commentary on the assurance with which the Government, in its Land Transfer Regulations of 1939, declared that—over large areas of the country—there was no more land for settlement. In fact, Palestine contained then—and contains today—substantial areas of unutilized or little utilized land. In the measure, however, that land *is* scarce, the inactivity of the Government in irrigation is the more culpable.

In the very early days of the Jewish National Home the basic structure of the water economy for Palestine was designed by the Jewish Agency (in the early comprehensive outline of P. Rutenberg). These plans were knocked askew, however, when the boundaries of Palestine were drawn so as to exclude the Litani River and the sources of the Jordan. When it had to abandon those plans for unified development, the Jewish Agency did not develop substitute plans, leaving the matter largely to private initiative with some encouragement of particular ventures. Not being a Government, the Jewish Agency lacks the resources and the authority to do a comprehensive irrigation job—try as it may to compensate for the absence of a development-minded Government. Not until 1940 was a Water Research Bureau established by the Jewish Agency and Jewish National Fund. Their work and the work done by experts of the Hebrew University, the Palestine Water Company, the Palestine Electric Corporation, and special irrigation engineers brought from abroad by the Jewish Agency, will in time provide the overall information on water resources which is needed for a general plan of irrigation. So far, however, there has not been enough expert work on the problem, and the work that has been done has not been coordinated. In any event, without the active participation of the Government, no large-scale irrigation plan involving the use of rivers and wadis could ever be put into effect.

Irrigated Area

Current irrigation practice is completely unintegrated. By 1933 comprehensive information on water resources was sorely needed by individual settlements, which were under pressure to find water economically in order to increase their agricultural and industrial activities. For lack of any overall hydrographic study, much less a plan of development, each settlement struck out on its own. The result was a sporadic and decentralized search for water, costly and wasteful of water resources.

At the beginning of 1945 the generally accepted estimates of land under year-round irrigation was 400 thousand dunums (100 thousand acres). As shown in the following table, Jewish land accounted for 226 thousand dunums, or over half the total irrigated area. Both Arab and Jewish irrigated land is predominantly citrus.

IRRIGATED AREA IN PALESTINE

(physical dunums) [a]

	Jewish		*Arab*		
Zone [b]	*Citrus (1941-42)*	*Non-citrus (1944)*	*Citrus (1943)*	*Non-citrus*	*Total*
Coastal plain	127,448	52,535	143,923		323,906
Plain of Esdraelon (West)	514	8,535	67		9,116
Valley of Jesreel	915	5,122			6,037
Beisan Valley	97	3,693	358		4,148
Jordan Valley	1,386	7,990			9,376
Upper Galilee	191	4,568	80		4,839
Lower Galilee	181	921	118		1,220
Judean Hills and Jericho		525	464		989
Unspecified		11,000 [c]	562 [d]	28,807	40,369
TOTAL	130,732	94,889	145,572	28,807	400,000

Source: Data on Jewish irrigated area prepared by the Jewish Agency for Palestine, March 1945. Data on Arab citrus area from *Village Statistics*, compiled by the Departments of Land Settlement and Statistics, April 1943. Arab non-citrus irrigated area is the residual. [a] As opposed to crop dunums. [b] Zones are those used in the Census of Jewish Agriculture. [c] Refers to crops which were not included in the other partial enumerations. Includes pistachio trees, summer forage, nurseries, sub-tropical trees, olives, and other plants and an addition for vines. [d] Includes Nablus district, 519 dunums, and Jenin district, 43 dunums.

Eighty percent of the total irrigated area is located in the coastal plain. Almost all the Jewish citrus area lies along the coast (from Kfar Warburg in the south to Benjamina in the north) while of the Jewish non-citrus irrigated area, more than half lies in the coastal plain (stretching from Gaza in the south to Nahariya in the north). Arab citrus cultivation is also confined almost 99 percent to the coastal area. Arab non-citrus irrigated area is limited to Beisan, Jericho, and Upper Galilee; the exact amount under irrigation in each area is unknown.

In addition to the areas under regular irrigation, as set forth in the table, supplementary irrigation is carried on during certain months of the year. In Jewish agriculture this supplementary irrigation amounted to about 35 thousand dunums in the middle of 1944.

The story of the growth in irrigated area in Palestine is an uncertain one. A series of figures gathered from diverse sources is set forth in the table below; it is not a continuous series and cannot be broken down by citrus and non-citrus irrigation, but it indicates in a very general way the growth in irrigated area. In 1936 three different estimates placed the irrigated land area at 300,000 dunums (Maurice Hexter), 325,000 dunums (Abraham Granovsky), and 350,000 dunums (Palestine Royal Commission). We have accepted the Royal Commission estimate. During the war years the decrease in the area of citrus groves offset, to a large extent, the increase in non-citrus irrigation, resulting in a net increase in irrigated area of only about 20,000 dunums from 1939 to 1944.

DUNUMS UNDER IRRIGATION IN PALESTINE, 1931-44

1931	262,276
1936	350,000
1939	380,000
1944	400,000

Source: 1931 figure, *Census of Palestine*, 1931, Part I, Vol. I, pp. 23 et seq.; 1936 figure, *Palestine Royal Commission Report*, p. 255; 1939 figure estimated by Mr. David Horowitz; 1944 figure taken from preceding table.

About 250 to 300 million cubic meters of water were used in 1944, or an average of 625 to 750 cubic meters per dunum. The water requirements for irrigation range from as little as 300 cubic meters per dunum for some crops in the highest rainfall, temperate areas, to more than 2,000 cubic meters for banana culture in the hot, low rainfall areas of the lower Jordan.

A large portion of all irrigation in Palestine is accomplished by the use of wells. The first deep well was dug in 1933 at Yavneel. An estimate of the number of wells in 1935 placed the figure at 2,500 to 3,000 with a yield of 150 million cubic meters per irrigation season. Their yield today is probably closer to 250 million cubic meters. The wells are especially concentrated in the citrus area of the coastal plain. The Palestine Electric Corporation, trying to sell water from the Yarkon for irrigation, has found it difficult to compete with wells in the region. The P. E. C. water is used largely where wells have gone dry or where the water is saline. In 1944 the Corporation was irrigating about 6 thousands dunums, or about 10 percent of its capacity.

The ratio of land irrigated by springs to that irrigated by wells is 1:20. Wells are dominant in citrus irrigation. In the Jewish non-citrus irrigated area, wells are used for about 70 percent of the area; about 15 percent is irrigated by river pumping and the remainder by springs.

The exploration and development of water resources in Palestine has been carried on by a variety of groups. Jewish national institutions have sponsored several water companies, the most important of which is the Mekoroth Water Company. The Palestine Economic Corporation, an American investment company, has also sponsored several water companies, the most important of which is the Palestine Water Company. Other well-known water companies, although of lesser importance, are the Emek Water Company and the Gilboa Water Company (sponsored by the Jewish national institutions), the Water Company Aleph (sponsored by the Palestine Economic Corporation), and the Sharon and Samaria Water Companies (sponsored jointly by both groups).

Water supply cooperatives formed by neighboring settlements have been even more active than the water companies. At the end of June 1944 there were 68 Jewish and one non-Jewish water cooperatives registered with the Government. The Government has granted interest-free loans limited to £P 70 for the purpose of carrying out borings for water. Since this amount covered only a fraction of the cost, such loans have not been important.

Irrespective of an integrated irrigation system, there are still large opportunities for irrigation in Palestine through the use of local underground sources. Throughout the Valley of Esdraelon, where the settlements are in need of additional water, the drilling of wells was retarded during the war and many of the settlements are irrigating only small portions of the land suitable for irrigation. Much more could be done also in damming up wadis. The experiment recently undertaken at Asluj, in the northern Negeb, of constructing a small dam for irrigation during the rainy season is being watched with great interest. The area to the east and to the south of the Sea of Galilee, in the Beisan plain and in the central Jordan could also be more extensively irrigated. A number of Jewish agricultural settlements have grown prosperous by utilizing the waters in this area for fish ponds and to cultivate bananas, which require water at the rate of 2 thousand cubic meters per dunum or more.

Another avenue for local endeavor lies in the greater use of the lower Jordan. Just north of the Dead Sea at Beit Haarva small stretches of the saline land have been desalted through flooding from the Jordan. The soil was rinsed for five to six months with an average of 4,000 cubic meters per dunum until chemical analysis showed that most of the salts had been washed to levels where they were harmless to plant growth. Up to the present, after a cycle of five crops, there is no evidence of the return of the salts to the levels from which they had been removed. The undertaking was costly, but the desalted soil has proved to be as productive as the non-salted soils of the Upper Jordan Valley.

Irrigation Costs

It is impossible to fix a maximum economic water rate. Whether the water rate in a specific instance is economic is determined by the relations among the cost of delivering water, the water required per dunum and the value of the crop to be cultivated. In the production of a given yield, a water rate of 6 Palestine mils per cubic meter in a fertile, well-situated area may be "cheaper" than a rate of 2 mils in an area where much more water is required and which is remote from markets.

Water rates in Palestine vary from less than 1 mil per cubic meter to more than 10 mils per cubic meter. An analysis of the operating cost in 1942 for four water companies and two water cooperatives revealed that operating costs for these six groups ranged from 1.6 to 3.6 mils per cubic meter. The two cooperatives had the highest operating costs. Addition of such items as interest and depreciation determined the selling price of the water. Their total costs varied depending on the price level that prevailed when their irrigation systems were installed, the accessibility of the water utilized, and the size of the irrigated area. In 1943 the average selling price for this group was 3.96 mils per cubic meter. Clearly the depreciation and amortization elements of cost bulked very large.

In all of the six cases cited above, electricity accounted for 70 percent of operating costs. Electric rates per kwh in Palestine, which have been the same for irrigation since 1935, are from 50 to 70 percent higher than the rates in California. Yet the electric rates for irrigation in Palestine are subsidized by residential consumption. If the California rates prevailed in Palestine, irrigation water would cost at least 0.5 mils per cubic meter less. Interest and amortization paid by the above group ranged from 7 to 9 percent, with interest alone ranging from 4 to 7 percent.

An analysis of the cost of irrigation water pumped from wells prepared in 1937 by M. J. Goldschmidt, a Government engineer, showed that for water pumped at the rate of 120 c.m. per hour and 360 thousand c.m. per year, the costs at the top of the well varied from 0.85 mils per cubic meter to 2.18 mils when using electric power, the depth of the water varying from 15 to 85 meters. The same water cost 0.85 to 1.59 mils when diesel engines were used. If only 60 cubic meters per hour were pumped (180 thousand cubic meters per year), the plant outlay was less, but the water cost more.

To reduce water rates for irrigation purposes, Palestine needs electricity of lower cost, (perhaps through the use of diesel engines), lower interest rates, and the exploitation of wells at their most economic operating level.

The total cost of the many small disconnected borings for water in Palestine over the past 20-odd years has been very high, and much water has been wasted. The most glaring example of waste is to be found in the central Sharon. From 1926 to 1943, 132 wells were drilled in this district. At the beginning of 1944, 70 of these wells were in operation. These 70 provided water at the rate of 5,600 cubic meters per hour, when only 3,000 cubic meters per hour were needed for the land under irrigation. One expert judged that 16 correctly placed wells, 12 of them working 20 hours per day and the other 4 held in reserve for emergencies, could have supplied the entire area. Of the 70 wells, 25 are operated by 10 water cooperatives, and the other 45 are operated by private owners. In their eagerness to increase sales and thereby reduce their price, the cooperatives have lengthened their pipelines until in many instances parallel lines belonging to two different cooperatives run along the same street, sometimes carrying water in opposite directions. Some parcels of land only a few dunums in size have the pipes of three cooperatives running near them.

There are other examples of waste. Water has been wasted in all parts of the country through ignorance of agricultural methods. Experts have stated that in some places water has been used for irrigation to such excess as to be a detriment to the soil. In the Even Yehuda region, which is rich in wells, some of the privately owned wells supply 300 cubic meters per hour and work only 2 hours per day while nearby Jewish National Fund land suffers from lack of water. The waste of spring water around the eastern end of the Esdraelon Valley, Beisan, and Jericho, is notorious. Due to the antiquated system of water rights, one cultivator is permitted to use many times as much water to the dunum as is allowed another cultivator.

Water Laws

Aside from the centralization required in the exploitation of water resources, there is need for a law covering the use of the water. There is need for over-all Government coordination—and initiative. At present water rights are seldom registered; most of them depend on custom and usage. In the case of underground water, there is always danger of salt water invasion by the lowering of the water table if too much water is drawn. Control is also needed to prevent pollution of the underground water. Steps are needed to coordinate soil conservation and irrigation.

So far there has been no agreement as to the type of law required. The disagreements grow partly out of selfish vested interest and partly out of basic political differences. In 1942 the Water Commissioner proposed three laws—one to control drainage, one on water rights and the control of surface water, and one on underground water. So far only the drainage law has been enacted.

The Jewish Agency was opposed to the draft laws on the use of surface water and wells. It believed that these laws would give a non-development-minded Government power to arrest further water development. According to the draft laws, water rights would be vested in the land, and the right to use the water would be limited to those who had used it for not less than ten years. In view of the dangers involved in giving complete powers to a non-development-minded Government, the Jewish Agency prefers that water rights should remain as they are at present—vested in persons and transferable exclusive of the land if the owner so desires. The Agency is clearly in a dilemma because it agrees, in principle, that Government should have overriding power to secure economic use of water. It agrees that Government should be able to appropriate water if it is not being used beneficially. It agrees too that there should be some means of controlling conflicting claims. The Agency is frankly afraid, however, of the control of irrigation by the present Government. A responsible member of the Agency has expressed this fear graphically by saying that if a Government like the present one had taken power in 1920 to control all digging of wells in the coastal plain, Palestine would today have almost no citriculture. Yet this representative of the Jewish Agency was quick to agree that further comprehensive water development will require active Government support and general Government supervision. The record of the Palestine Government in water development is so poor that no group interested in an active policy is happy about putting greater authority into the Government's hands.

FUEL

As opposed to the complete disorganization in the development of the water resources of Palestine, fuel and power development have been subjected to too much control—with equally bad results. The oil pipeline from Iraq terminating at Haifa, and the oil refinery completed in that city in 1939, plus the resources for hydro-electric development would seem to ensure the domestic supply of energy at low prices. But due to the monopolistic control exercised by the oil companies and other groups, the cost of energy has been high.

The distribution of energy consumption by source in 1930, 1938, and 1944 is shown in the table on p. 173. Over this 14-year period total energy use, excluding that used directly by military establishments, was multiplied almost five times. Per capita fuel consumption increased almost 137 percent, from 1.43 million kcals (kilogram-calories) in 1930 to 1.91 million kcals in 1938 and to 3.39 million kcals in 1944.

The pattern of fuel consumption over this period also shifted radically. In 1944 oil products furnished about 87 percent of total energy consumption in Palestine as compared with 56 percent in 1938 and 44 percent in 1930. The greatest increase in oil use occurred in fuel oil. In production of electric power, oil was the basis for the generation of approximately 144 million kwh in 1944 as compared with 27 million kwh in 1938.

SOURCES OF ENERGY IN PALESTINE, 1930, 1938, AND 1944

	Calorific value (Billions of kcal) [a]			*Percent of total consumption*		
Fuel commodity	*1930*	*1938*	*1944*	*1930*	*1938*	*1944*
Coal	567	686	284	43	27	5
Firewood	180	210	210	13	8	4
Fuel oil	165	665	3,110	12	26	54
Kerosene	302	468	800	23	18	14
Benzine (gasoline)	114	322	1,390	9	12	19
Methylated spirits	1	3	3	[b]	[b]	[b]
Butane		2	2		[b]	[b]
Hydroelectric power		232	224		9	4
TOTAL CONSUMPTION	1,329	2,588	6,023	100	100	100

Source: H. Rothschild, "Power and Fuel Economics in Palestine," in *Palnews Economic Annual of Palestine*, 1939; 1944 data estimated by authors on basis of data from *General Bulletin*, Supplement, Nov. 1944, pp. 38, 41; firewood, methylated spirits, and butane held constant. [a] Kilogram-calories; 1 kcal = 3.97 BTU. [b] Less than ½ of 1 percent.

Coal and firewood decreased in importance from 56 percent in 1930 to 9 percent in 1944. Although the relative decrease in coal use was well under way by 1938, its practical elimination during the war resulted from the cutting off of coal imports from Great Britain. At the end of 1942 all locomotives of the Palestine Railways were being converted to oil, and by the second half of 1943 experiments were under way to convert the vertical kilns of the Nesher Cement Works from coal to oil burning.

In 1944 indigenous sources provided about 8 percent of total energy consumption: the hydroelectric power, the methylated spirits (which were inconsequential), and the firewood. As yet no oil has been discovered in Palestine. Since 1938 several companies have held prospecting licenses, but during the war shortages of equipment precluded prospecting in such a "wildcat" area as Palestine.

In view of the easier handling of oil-fired installations, oil seems generally to be firmly entrenched. The permanence of the widespread wartime shift from coal to oil is an unsettled question only in some cases. For specific applications such as lime kilns, the use of coal may return. In these cases a given unit of heat could be produced more cheaply before the war from coal than from oil, unless oil-firing dispensed with an attendant. It is therefore difficult to predict whether the conversion to oil will be permanent in these marginal cases.

The increasing dependence on petroleum products has made their price a major concern. The price of petroleum affects the cost of electricity, which in turn influences the cost of irrigation and industrial power. It also affects the cost of domestic cooking and heating and of motor transportation. In 1936 benzine and oil costs equalled 29 percent of total expenses of motor transport. In irrigation, the cost of electricity equals 70 percent of total operating costs. In industry fuel oil costs may run as high as 25 percent of value of the product. Electric power costs in industries established in Palestine rarely reach 4 percent of the value of the product; however, some electro-chemical or electro-metallurgical industries (in which electric power costs are representatively more than 4 percent of the value of product) might have developed in Palestine if power costs had been lower.

In spite of the location of important refineries within the boundaries of Palestine, oil is "costed" there on the assumption that it is transported to Haifa from the Gulf of Mexico. As a result, the average wholesale price of fuel oil in Palestine from 1938 to 1941 was 52 percent higher than in the United States.* This high price of fuel is one of the most important drags on Palestinian economic development. Petroleum prices in Palestine are higher than in other countries in the Middle East. This is shown graphically in the following table on retail prices *without* taxes.

OIL PRICES IN THE MIDDLE EAST ON OR ABOUT JULY 10, 1939
(Retail prices per gallon in bulk *less* customs duties and taxes)

	Gasoline		*Kerosene*	
Country	*In Palestine mils*	*In U.S. cents*	*In Palestine mils*	*In U.S. cents*
Palestine	33.8	15.8	23.5	11.0
Egypt	16.2	7.6	12.0	5.6
Syria	21.4	10.0	22.2	10.4
Iraq	25.0	11.7	20.5	9.6

Source: Adapted from U. S. Dept. of Interior, Bureau of Mines, *World Retail Prices and Taxes on Gasoline, Kerosene and Motor Lubricating Oils, Quarterly*, Sept. 25, 1939.

Differentials in retail prices among the various Middle Eastern countries are not the result of distribution costs within the country. In import prices also, Palestine is consistently highest.

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* Comparison of average furnace oil price in Palestine with July tank car price of No. 2 furnace oil in New York Harbor. A report of an official Goverenment of Palestine "Committee on Import Prices" at the beginning of 1945 estimated that Palestine wholesale prices of fuel oil were 40 percent higher than in the United States.

Unlike the governments of other Middle East countries, the Government of Palestine has not curbed monopolistic price practices. Only four distributing companies operate in Palestine, and they work on a strict share-the-market basis. Other companies are unable to obtain import licenses from the Palestine Government. Moreover, when various associated oil companies entered into a series of conventions with the Government first for the laying of pipelines across Palestine in 1931 and 1933 and then for the erection of a refinery in 1938, the Government was unwilling to insist that they guarantee a competitive price to Palestine consumers. It did stipulate in Article IV of its convention with Iraq Petroleum Company, Ltd. in 1931, and again in its convention with the Anglo-Iranian Company, Ltd. in 1933, that "The conditions of sale of such petroleum products in the local market will form the subject of an arrangement between the High Commissioner and the company." If an arrangement was adopted, it has never been made public and it did not eliminate monopolistic price practices. The opening of the refinery at Haifa in 1940 did not result in lower petroleum prices. The British Government in London has been especially unhelpful in overcoming the abominable situation. Officials of the Palestine Government have confessed frankly that the influence of the oil companies in London is greater than theirs.

As shown in the following table, fuel prices reached their peak in 1941 and thereafter were stabilized at levels slightly under the peak until the last quarter of 1943. The largest increase occurred in coal, an increase of 170 percent between 1939 and 1941, while the smallest (15 percent) took place in benzine (gasoline). In November and December 1943 moderate price reductions were initiated for petroleum products, which were reflected in retail prices. By December 1944 the wholesale price of benzine had increased by another 13 percent, while the prices of all other petroleum products had decreased.

INDEX OF WHOLESALE PRICES OF SPECIFIED FUEL COMMODITIES IN PALESTINE

Kind of fuel	*1939*	*1941*	*1943*	*1944*	*December 1944*
Coal	100	270	264	273	279 [a]
Kerosene	100	138	111	99	99
Benzine	100	115	115	125	128
Gas oil	100	155	139	131	125
Diesel oil	100	154	140	131	125
Furnace oil	100	149	139	127	118

Source: Adapted from *Statistical Abstract*, 1943, p. 26; and *General Bulletin*, 1944 and 1945. [a] Fixed maximum price.

The justification of the price increases that characterized all petroleum products except benzine during the first four years of the war is far from obvious. The cost of transportation by pipeline could not have been subjected to any appreciable additional costs, and there were no shortages of crude petroleum, especially in 1940 and 1941 when the price rises occurred. If oil had been in short supply in 1942 and 1943, conversion from coal burning to oil burning would not have been encouraged. The explanation would not appear to lie in increasing processing costs since, had these risen sharply, the price of benzine would also have risen. Yet the price of benzine did not show a sharp increase until 1944, when the prices of the others had already decreased.

The nature of the oil pricing problem in Palestine may be clarified somewhat by an examination of the corporate structure of the Palestinian oil industry. The briefest review of it makes it clear that in the matter of oil prices, Palestinians and their local government must contend with several powerful oil empires and with the British Government itself.

The Iraq Petroleum Company, which has the concession for the exploitation of the Mosul oil fields in Iraq and which runs the pipelines from these fields to Tripoli and to Haifa, is owned by an international group of companies. A 23¾ percent interest is owned by each of the following: The Anglo-Saxon Petroleum Company, Ltd. (40 percent of whose stock is owned by Shell Transport and Trading Company, Ltd. and 60 percent by the Royal Dutch Company), Anglo-Iranian Oil Company (a majority of whose voting stock is owned by the British Government), the Compagnie Francaise des Petroles, and the Near East Development Corporation (owned jointly by the Standard Oil Company of New Jersey and the Socony-Vacuum Oil Company). The remaining 5 percent is privately held.

The Anglo-Iranian Company in October 1933 signed a convention with the Government of Palestine whereby it obtained the right to refine oil in Palestine or to dispose of this right to other companies. The Anglo-Iranian Company, Ltd. early in 1938 disposed of its right to refine petroleum in Palestine to the Consolidated Refineries, 50 percent of whose stock is owned by the Anglo-Iranian Company and the remainder by the Anglo-Saxon Petroleum Company. The crude oil is received from the Iraq Petroleum Company and by supplemental convention the oil so received is not deemed to be marketed locally, hence exempted from custom duties. The refinery is further permitted to import all construction and operating supplies free of customs duty. The refinery's daily capacity is 80 thousand barrels.

Given the monopolistic prices of petroleum products, the Association of Engineers and Architects of Palestine recommends that industry economize on its fuel use. They suggest that petrol engines in automobiles be replaced by diesel engines, which burn cheaper fuel. At the present time diesel-engined conveyances must pay a higher licensing tax to make up for the loss of revenue to the government, but this can be changed. Even so, the conversion of automobiles from petrol to diesel engines would be an expensive matter. Fuel can also be conserved by the substitution of furnace oil for more expensive oil wherever possible, by the use of heating methods best suited to a given type of product, and by the construction of heating units of the best possible materials and large enough to take advantage of the economies of scale.

While fuel economy is most commendable, it hardly presents the long-run solution to the problem of monopolistic oil pricing in Palestine.

POWER

Electric power in Palestine is supplied by two companies: the Jerusalem Electric and Public Service Corporation, which supplies the Jerusalem area, and the Palestine Electric Corporation, which has power supply rights to all of Palestine outside of Jerusalem. The Palestine Electric Corporation was formed in 1923 and operates under a concession granted to Pinhas Rutenberg by the Palestine Government. It is incorporated in Palestine with offices in London, and its Board of Directors is largely British. The Jerusalem Electric and Public Service Corporation began operations in 1929. It, too, has a British directorate.

The concession to the Palestine Electric Corporation gives it sole rights for 70 years dating from 1926 to exploit the Jordan and the Yarmuk for the generation and transmission of electricity in Palestine outside the Jerusalem area, as well as the right to supply electricity to Transjordan. The High Commissioner has the power to purchase the company at the end of the thirty-seventh year of the concession and at 10-year intervals thereafter. Thus the first date at which the concession can be purchased is 1963. This fact is of considerable importance in connection with future development of hydroelectric power in Palestine.

The concessions to both electric companies provide for supervision by the High Commissioner of financial operations, including the maximum amounts to be set aside for amortization of share capital and depreciation reserves. The High Commissioner also has regulatory authority over rate schedules and profits. This authority is not a strong one, however, since he may call for a revision of rate schedules only every seven years during the first twenty-one years of the concession, and at 5-year intervals thereafter. No permanent public utilities commission has been established, and intervention by the High Commissioner has not been particularly frequent.

The total capacity of the two electric companies is approximately 89,200 kw, about 1,800 kw of which are probably obsolete. Approximately one-fifth of the generating capacity is hydroelectric; three-fifths is steam; and the rest is diesel powered.

Unlike the United States and the western European countries, Palestine had no public service power plant in operation at the end of World War I. Lighting was done by the use of kerosene, and power was still derived from primitive means. Shortly after the war, two small municipal plants were established at Nazareth and Tiberias, but the former shortly went out of business. Though a few small buildings and motion picture theaters already had private electric plants, it was not until 1923 that in Tel Aviv the first central station for electric service was completed. This station had one diesel generator with a capacity of 1,000 HP. Subsequently four more diesel generators were added, making the total capacity 4,476 kw by 1930. In 1925 stations were established at Haifa (895 kw) and at Tiberias (102 kw), and the existing municipal station (75 kw) was taken over by the PEC.

The only hydroelectric plant in Palestine is located at Tel Or (Naharayim) at the junction of the Jordan and Yarmuk Rivers; it was completed in 1932. Three vertical turbo generators provide a capacity of 18,623 kw. High tension transmission lines reach from the hydroelectric plant to Haifa and Tel Aviv, replacing the electricity formerly supplied by the old thermo-electric plants; these became stand-by capacity. In 1937 and 1939 two large steam plants were built at Haifa and Tel Aviv, respectively. The former has a capacity of 30 thousand kw and the latter of 24 thousand kw. Another small oil plant was recently established at Safad. The point at which thermal energy becomes competitive with hydroelectric energy is uncertain. It depends on the price of the oil and the cost of construction and the load factor of the hydroelectric station. Given cheap fuel oil, the construction of further hydro plants would be doubtful, unless their construction were undertaken as part of a long-term dual-purpose irrigation and power project.

The Jerusalem Electric and Public Service Corporation develops its power from 9 diesel engines with a total capacity of 11 thousand kw. In addition, 4 of the larger industrial establishments, Palestine Potash, Nesher Ltd., Jerusalem Water Supply Company, and Consolidated Refineries, have their own electric plants with a capacity (excluding the last-named) of 10,650 kw.

During the war years generating capacity did not increase. Transmission and distribution lines have been extended only when the work could be justified on the grounds of national defense. Palestinian engineers estimate that the existing generating capacity of the Palestine Electric Corporation, assuming a load factor of roughly 30 percent, can provide about 200 million kwh per annum. On the same basis, the Jerusalem Company could provide about 29 million kwh, or a grand total of 229 million. By the end of 1943 the rapidly growing demand for electric energy made it imperative that additional generating capacity be installed as soon as practicable. In 1944 the Palestine Electric Corporation operated at a maximum load of 51,700 kw as compared with 33,900 kw in 1939 and a total capacity of about 78,200 kw, some of which is obsolete. It is noteworthy that at no time during the war was there a shortage of electric power. This can be laid to the foresight of the Palestine Electric Corporation in developing its thermal plants.

Consumption of Electricity

The sale of electricity has increased, as shown in the following table, from approximately 2,341,000 kwh in 1926 to over 91 million kwh in 1939. During the war years sales more than doubled again, reaching about 184 million kwh in 1944. In that year consumpton of electricity was over 78 times greater than in 1926, while the total population approximately doubled over the same period. The number of consumers of electricity also increased, from 6,500 in 1926 to over 96,000 in 1942. Approximately 8,000 are served by the JEPC and 88,000 by the PEC; of the latter, approximately 3,000 customers were added during the war. About 92 percent of all sales are made by the Palestine Electric Corporation. In addition to its sales, the Palestine Electric Corporation produces about 6 million kwh each year for its own use.

SALES OF ELECTRICITY
(*Thousands of kwh*)

Year	*Total*	*Palestine Electric Corporation*	*Jerusalem Electric and Public Service Corporation*
1926	2,344	2,344	
1930	6,168	6,168	
1935	53,670	50,362	4,308
1939	91,475	84,077	7,398
1940	101,388	93,874	7,514
1944	184,000	170,000	14,000

Source: *Statistical Abstract*, 1943, p. 179; 1944 figures estimated by Mr. A. Rutenberg.

Despite the phenomenal increase in electric consumption in two decades of development, Palestine still lags far behind the industrialized countries of Europe and the United States in average per capita consumption. In Palestine, per capita consumption in 1944 was about one-eleventh that of the United States in 1942 and one-third that of Britain in 1935. Probably not more than a third of the houses in Palestine are wired for electricity. On the other hand, electric consumption in other Middle Eastern countries is no doubt lower than in Palestine, for even in Palestine electrification has made little progress in the Arab rural communities.

As shown in the following table, for the past fourteen years industry, irrigation, and other uses have each accounted for about one-third of the total sales of the Palestine Electric Corporation. The use of electricity in irrigation has, however, increased more rapidly than in the other two groups, and barring an unforeseen development in industry, will probably continue to do so in view of the fact that water is now being drawn from deeper strata. The "other" group includes both residential and commercial uses.

PERCENT DISTRIBUTION OF ELECTRICITY SALES, BY TYPE OF CONSUMER

	Palestine Electric Corporation			
Year	*Total*	*Industry*	*Irrigation*	*Other*
1930	100	35.5	28.0	36.5
1935	100	34.1	32.0	33.9
1939	100	29.9	33.9	36.2
1944	100	36.6	32.7	30.7

Source: Derived from *Statistical Abstract*, 1943, p. 179. Data for 1944 estimated by Mr. A. Rutenberg.

Sales of the Jerusalem Company are largely to residential and commercial users and to government offices. Less than 10 percent of their sales, according to data for recent years, are for industrial purposes.

Residential consumption of electricity will probably increase further in the postwar period, particularly if incomes are maintained. Electric refrigeration and air conditioning offer particular promise, and the use of electricity by Arabs for lighting can also be expected to increase.

Rates

Electric rates in Palestine are high. In the early stages of development of the industry, industrial power rates in Palestine were more than seven times higher, and residential rates roughly three times higher, than comparable rates in the United States in 1925. Reductions in rates during the early 1930's resulted in an average price of 8.6 mils (4.2 cents*) per kwh by 1937, and 7.3 mils (2.9 cents*) by 1940. In the United States the 1937 average price per kwh was 2.1 cents, or just half the Palestinian level. Naturally, any comparison of electric rates in these two countries must take account of the fact that production is on a far smaller scale in Palestine due to the smallness of the market.

The steady downward trend of rates in Palestine was reversed in 1941 when the Palestine Electric Corporation increased its rates by approximately 20 to 25 percent for many types of service. The average price of electricity rose from 7.3 mils (2.9 cents) per kwh in 1940 to 8.2 mils (3.3 cents) in 1941, and 8.6 mils (3.4 cents) in 1942.

During the war years operating costs rose sharply due to higher wages and higher fuel costs, but power rates rose much less due to the larger output. The total cost of production per kwh rose from an average of 5.6 mils in 1938 to 6.0 mils in 1942.

Rates charged by the Jerusalem Company originally started at about the same level as those of the Palestine Electric Company. Its rate reductions did not continue, however, and by 1939 its rates were substantially higher than PEC rates. This discrepancy was largely removed with the increase in PEC rates in 1941.

Profits

The Jerusalem Electric and Public Service Corporation has proved to be a profitable venture. Dividends were low in the early years of operation, but for the year ending March 31, 1938 net profits were 8.3 percent of share capital, and a dividend of 7 percent was declared on ordinary shares.

Since 1930 the operations of the Palestine Electric Corporation have also been quite profitable, and today the company is in a very strong financial position. Although profits declined from 1938 to 1940, they rose again after the rate increase in 1941, and reached 7.1 percent of fixed plant after depreciation in 1941 and 1942 and 7.8 percent in 1943.

Depreciation reserves in 1943 amounted to 29.5 percent of the value of fixed plant, which is high in view of the fact that the major plants were then only four to ten years old. The reason given for this high rate of depreciation is the cost of providing for contingencies in an uncertain market. In addition to its depreciation reserves, the company had in various capital amortization funds a sum of £P 497,000, equal to 18 percent of paid-up share capital, and general and war-emergency reserves equal to £P 288,000. The existence of such large depreciation, amortization, and other reserves, coupled with a highly favorable record of dividend payments, raises considerable doubt as to the wisdom and justice of the price policy the company has followed. It would appear that the company has forsworn the substantial rate reductions it might have made in order to favor its investors. It has failed to realize the effect of substantial rate reductions in increasing demand and making possible substantially reduced costs per KWH.

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* 1937, 2.024 mils=1 cent; 1940, 2.478 mils=1 cent.

Individual farms and industrial plants are not completely in the power of the Palestine Electric Corporation. Alternative sources of power are to be found in small, privately-owned prime movers such as high-speed diesel engines or windmills. Much more information is needed before windmills can become economically feasible on a large scale. But, on the basis of prewar data, the high-speed diesel engine can in many applications provide power at lower cost than the tariffs charged by the Palestine Electric Corporation.

From the point of view of public health and safety, however, the diesel engine has several disadvantages. It often gives off unhealthful combustion gases and requires the storage of fuel which is dangerous. It requires the use of belt drives, which obstruct light in a factory and frequently cause accidents. It would, therefore, be in the public interest if the tariffs of the Palestine Electric Corporation were reduced to the level of the operating costs of the diesel engines, the more so since in principle centralized power production should be cheaper than separate units.

RESOURCES AND ACCOMPLISHMENTS

The total water which might be made available for irrigation in Palestine is of the very rough order of magnitude of 3 billion cubic meters per annum. Even if we assume the generous average water requirement of 750 cubic meters per dunum (equivalent to 30 inches of water for each inch of surface), the available water resources would suffice to irrigate some 4 million dunums (1 million acres) of land. In fact only about one-tenth of this amount was irrigated in 1944. A heavy weight of responsibility falls on His Majesty's Government in the United Kingdom for the limited progress of this basic development work.

Palestine has very meager fuel resources within its own frontiers. But it has the natural advantages of location near the Iraqian, Iranian, and Arabian oil fields. This natural advantage has not been converted into an economic advantage. The British Government has allowed a monopolistic group of oil companies to establish prices that constitute a severe drag on economic development. The progress of Palestine has counted less than the profits of the petroleum monopolists.

Due to the limited development of irrigation (which would have provided power as a by-product) and the high cost of fuel oil, electricity prices have been very high in Palestine. In 1944 they were, on the average, about twice as high as in the United States. In this case also, the high profits of the operating companies (partly concealed in special depreciation, amortization and contingency reserves) have gone a long with the deficiency of effective Government regulatory initiative to constitute a barrier to Palestine's economic progress.

A favorable natural resource position has been dissipated by unaggressive, unimaginative Government and tender consideration for vested interests.

CHAPTER 14

AGRICULTURE TODAY

LAND OWNERSHIP AND PRICES

The total land area of Palestine is about 26,300,000 dunums or about 6,500,000 acres.* The use of the dunum as a convenient standard of measurement suggests the relatively small areas with which Palestinian agriculture operates. The dunum is only 10 meters by 100 meters. The standard American football field, 100 yards long and 53 1/3 yards wide, contains nearly 4.5 dunums.

Palestinian lands have a bewildering variety of legal statuses. *Mulk* land most nearly approximates our common law fee simple, with complete rights of sale and disposition by will. *Miri* land is approaching the status of *Mulk,* but it still is bound by a traditional inheritance system; formerly *Miri* reverted to the State on continued non-cultivation, but this State right has ceased to be exercised. *Musha* land is farther removed from fee simple; it is held subject to communal rights of repartition—though not commonly equal repartition.

Musha is giving way to *Miri* because any landowner has had the right for the past 85 years (see page 50 above) to claim his separate share in *Musha* lands, a share that would thenceforward be free from any general repartition. The sharing out has proceeded slowly, first, because the total claims of the villagers (never having been accurately measured or registered) often amount to more land than there is in the whole village and, second, because the villagers cannot agree about the comparative value of the various kinds of land they own jointly. Under the Mandate, Government has attempted to settle the conflicting claims and to register the resulting land rights in a comprehensive way. It was anticipated, when Land Settlement began, that in a few years all *Musha* village lands would be reorganized into consolidated, workable farms. That anticipation has been, in great measure, disappointed.

By the end of December 1944, even the certainty of title that results from Land Settlement operations had been achieved in less than one-sixth of the total area of the country. Exactly 4,142,010 dunums of land had gone through the final investigation stage of land settlement. Of this total, 662,362 dunums had been found to be State Domain. The most important areas of the country, those in the plains, were almost entirely "settled". But the most difficult areas, in the hill country, where encroachment of State Domain is greatest and where grazing rights present most difficulty, had hardly been touched. Over the five years 1940-44, in which Land Settlement made most rapid progress, an average of 412,321 dunums per year passed through the "final investigation" stage. At this rate, the settlement of land titles outside the Beersheba sub-district will be completed in 1968—fifty years after the establishment of British rule in Palestine. Titles in the Beersheba sub-district will then still remain unsettled.

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* 1 dunum = 0.247 acre; 1000 dunums = 1 square kilometer = 0.386 square mile.

Moreover, clarification of titles has not meant the formation of consolidated workable farms. On the contrary, it is extremely common for the land of an Arab village *after* Land Settlement, to consist of parcels a few meters wide and a thousand meters long. The same parcel may run up a hill, across a wadi, and through a road. And that parcel may have ten co-owners, one of whom owns as little as a one-fiftieth interest in the total.

Such sample studies as have been made suggest that the representative Arab farmer in a cereal village, *after* Land Settlement, may own 70 dunums within 10 parcels of various sizes and that his interest in these 10 parcels is shared with an average of about 35 partners! Such an arrangement of land holding means that the farmer is constantly travelling from one plot to another, plots are too small to permit use of machinery, and there is continual need for agreement among a large number of partners, who own the soil jointly but cultivate it separately. If it be accepted that the purpose of Land Settlement is to achieve both certainty of title and an arrangement of ownership that facilitates rational cultivation, the Land Settlement effected hitherto by the Government of Palestine must be adjudged largely a failure. The Arab peasant cultivator is the sufferer.

The data accumulated during Land Settlement operations have never been tabulated for economic analysis. Therefore there is no systematic information — except for the Jewish sector, where censuses have been taken by the Jewish Agency—on the distribution of land ownership, the degree of tenancy, or the size of operating farm units. Fragmentary evidence, tabulated for Government purposes in 1936, suggests that a maximum of four-tenths of one percent of all Arab owners of rural land owned at least 20 percent of all plain land and at least 24 percent of all hill land.* Taking into consideration only those Arab families engaged in agriculture who own between 5 dunums and 500 dunums of rural land, the average amount owned (outside the Negeb) seems to be of the very rough order of 70 dunums or 17.3 acres. The average size of the cultivated farm area (physical area, not crop area) is probably smaller than the average amount owned. This farm area supports an "economic family" of about six persons. Such a family provides a labor force variously estimated as the equivalent of between 1½ and 2½ full-time farm workers.

Jewish land-ownership follows a quite different pattern from that which prevails among the Arabs. At the end of 1920, Jews owned about 650,000 dunums of land in Palestine. Twenty-two years later, at the end of 1942, according to Government sources, Jewish land holdings amounted to about 1,476,000 dunums. At the end of 1943 they amounted, according to the statistics of the Jewish National Fund, to about 1,544,000 dunums, or 5.9 percent of the total land area of the country.** The remaining 94.1 percent of the land of Palestine belonged to Arabs, other non-Jews, and the Government.

Of the 1,544,000 dunums of land owned by Jews at the end of 1943, about 1,318,000 dunums consisted of rural land in northern Palestine, about 61,000 of rural land in the Beersheba sub-district, and about 165,000 dunums of urban land and industrial quarters. The Jewish rural land belongs increasingly not to individuals, but to the Jewish National Fund. Of the total increase of about 894,000 dunums in Jewish land holdings under the Mandate, the Jewish National Fund accounted for more than two-thirds. In 1920 the Jewish National Fund owned about 10 percent of the area of Jewish rural land; at the end of 1943, it owned about 52 percent of the area. By value, the share of the Jewish National Fund is considerably less because the most valuable citrus lands are primarily in private hands. (Moreover the Fund owns very little urban land.) The Fund holds land as the inalienable property of the Jewish people and leases it to individuals or groups for 49 years, at an annual rental of 1 to 4 percent of the land's cost. Should this rent prove too burdensome, it may be deferred or remitted. The lease is renewable, provided that the land continues to be used for the same purpose. The lessee is required to work the land himself. Should the land area leased to any individual (or group) turn out to be more than he can work himself, the area may be reduced, at the discretion of the Fund.

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* The percent of owners is a maximum because the same individual was counted more than once if he owned land in more than one village. The percent of the land is a minimum because the tabulation confusedly included some Jewish villages, in which land ownership is much more equal than in Arab villages.

** This excludes about 116,000 dunums owned by the Government but now under concession to Jewish companies.

The most distinctive feature of the Palestinian land system is the restriction of the right of Jews—whether Palestianian citizens or not—to buy land. On February 28, 1940, in accordance with the policy of the MacDonald White Paper of 1939, Land Transfer Regulations were established restricting the purchase of land by Jews, retroactive to May 18, 1939. Three zones were created. There was, first, a small free zone including all the municipal areas, the Haifa industrial zone, and the central part of the coastal plain, from Tantura to Arab Sukreir; this free zone comprises about 1,334,000 dunums, or 5.0 percent of the total land of the country. Here all persons—Jews, Arabs, and others—are equally privileged to buy land. A second zone, known legally as Zone A, was created covering the hill country, most preponderantly inhabited by Arabs, and part of the Gaza and Beersheba sub-districts; this zone covered about 17,132,000 dunums, or 63.4 percent of the total land of the country. In this zone Jewish purchase of land was prohibited. A third zone, know legally as Zone B, was created covering the Plain of Esdraelon, eastern Galilee, and parts of the coastal plain and the Negeb; this zone covered about 8,533,000 dunums, or 31.6 percent of the total land of the country. In this third zone, Jews may buy land freely from owners other than Palestine Arabs, but they may buy from Palestine Arabs only with the express consent of the High Commissioner. Amendments of April 18, 1940 permit transfer in execution of legal judgments and allow purchases by Jews in Zone A from owners other than Palestine Arabs.

In the free zone Jews already owned about 688,000 dunums. They consequently protested bitterly that they were being left free to buy only about 646,000 dunums (250 square miles) of land in a country in which they had been guaranteed the right to establish a Jewish National Home. The responsible British officers of the Government of Palestine admitted to us candidly, in the winter of 1944-45, that opposition to the Land Transfer Regulations is also almost universal among the Arabs owning rural land in Zones A and B; the Arabs who own rural land regard these Regulations as a burden imposed by the pressure of Arab merchants and lawyers who have at the same time assured that, as owners of land in municipalities, their own land transactions remain uncontrolled.

A majority of the members of the Permanent Mandates Commission indicated that they regarded this land policy as a violation of the Mandate under which Britain administers Palestine. Yet this policy is still being enforced.

As a result of Jewish efforts to buy land, the slow progress of irrigation, the general increase of population, and the general wartime inflation, land prices have soared. With the increased population and urbanization of the country, more and more rural farm land is getting near to cities; its value is therefore augmented by the pressure of urban and suburban land requirements. Inflation tripled the wholesale price level in Palestine during the war years; investors have purchased land as "a store of value". Prices are thirty times as high today as they were a quarter century ago. The average price paid by Jews for the rural land they bought in Palestine during 1944 amounted to over $1000 per acre. At the same time the rich black soil of the State of Iowa was selling for about $110 per acre. In both cases, the value of land includes buildings, orchards, and other improvements. In Palestine the 3-percent rural transfer tax may make for some understatement of prices actually paid. Similar, but less strong, reasons for understatement exist in the United States.

COMPARATIVE RURAL LAND COSTS, PALESTINE AND U. S. A.
(in dollars per acre)

	1920-22	*1933-36*	*1940*	*1942*	*1944*
Rural land bought by Jews in Palestine	$34*	128*	268	470	1,050†
Value of farm land, U. S. A.		31	32	35	45
Value of farm land, Iowa		71	79	85	111

Sources: For Palestine, D. Gurevich and A. Gerz, *Jewish Agricultural Settlement*, Jerusalem, 1938, and *General Bulletin;* for U. S. A., censuses of agriculture, interpolated by estimates furnished by U. S. Department of Agriculture, Washington, D. C. The £P-$ rate 1920-22 at $4.20, for 1933-36 at $4.80, and war years $4.035. The * signifies, inflated costs from inclusion of some urban land; † average of 5 scattered months.

It must be emphasized that, particularly after 1940, the above prices were affected by the general wartime inflation, which (see Chapter 19 below) was much more serious in Palestine than in the U.S.A. These prices are also, however, significant indicators of the permanent relative scarcity of land in Palestine as compared to the United States, a scarcity aggravated seriously—so far as Jewish buyers are concerned—by the Land Transfer Regulations.

These very high land prices have had the most profound effects on all aspects of Palestinian agriculture. They have meant Jewish payments to Arab land owners on so lavish a scale as to permit the Arab to sell part of his land, eliminate his debts, improve his farm equipment, and intensify his cultivation of the remaining land. Therefore Jewish purchases of land were responsible for much of the modernization that Arab agriculture in Palestine achieved before World War II. (Jewish land purchases would have been even more stimulating had not so large a share of the sellers been absentee owners, in many cases living abroad in Syria and Lebanon.) Further, these extremely high prices have meant that the land cultivated by the Jewish settlements is so expensive as to prohibit any paying agricultural enterprise if it were to be rented on a commercial basis. The acquisition of land has therefore become a Jewish national enterprise, pursued as a public policy, without thought of a normal business return on investment. From these high prices also comes much of the drive towards intensive use of the land in Jewish agriculture. The land is precious. Each dunum of ground deserves a high input of labor and capital. It must support as many people as possible.

CULTIVATION AND RECLAMATION

Of Palestine's total land area of about 26.3 million dunums, a maximum of 7.8 million dunums were actually cultivated in any one year during the years 1936-42. This figure is a maximum because it is based on records of individual crops, and in some instances two or more crops are grown on the same field in one year.

Controversy has raged fiercely on the question of how large a part of Palestine is "cultivable". History, and presumed history, have been liberally invoked to expand the estimates of the cultivable area; modern irrigation techniques and the remarkable achievements of the Jewish colonists in land amelioration have fought on the same side. On the other hand, the official Government point of view has identified the cultivable very closely with the actually cultivated area.

No systematic examination of the extent of cultivable land has been undertaken by the Government of Palestine during the past decade. The present official estimates of the cultivable area are based primarily on a survey made for tax purposes in 1932-34. Every landowner has a direct interest in concealing the fact that he has brought under cultivation land previously classified as uncultivated because only uncultivable land is permanently free of tax. Changes in land tax classifications do not result from systematic review but are the incidental result of other administrative operations such as changes in urban boundaries and Land Settlement. The officers of the Government of Palestine who were in charge of these matters in the winter of 1944-45 expressed awareness of the fact that considerable tracts of land classified in 1932-34 as uncultivable were now actually under cultivation both by

Arabs and Jews. They did not, however, have any statistical account of these lands or any economic analysis of the reasons that had led to their being brought under cultivation. For such information, they referred us to officers of the Jewish National Fund.

Under these circumstances, Government of Palestine estimates of cultivable land must be taken as referring broadly to land that has actually been cultivated for some years, occasionally or regularly. These official estimates do not fully cover recent changes, and they do not take into account the land that can be rendered cultivable by the extensive soil amelioration (stone clearance, terracing, etc.) practiced by some Arabs and Jews. With these qualifications, the following table gives a 1943 official breakdown of cultivable and uncultivable land.

OFFICIAL ESTIMATES OF CULTIVABLE AND UNCULTIVABLE PALESTINE LAND

(According to tax categories, March 1, 1943)

	In thousands of dunums			*In percentages*		
	Owned by Non-Jews	*Owned by Jews*	*Total*	*Non-Jews*	*Jews*	*Total*
Citrus and bananas	148	142	291	2.0	12.9	3.3
Other plantations	1,080	96	1,175	14.1	8.7	13.5
Taxable cereals	5,503	814	6,317	72.1	73.8	72.3
(of which Beersheba)	(1,576)	(64)	(1,640)	(20.7)	(5.8)	(18.8)
Untaxable cereal	900	51	951	11.8	4.6	10.9
TOTAL CULTIVABLE	7,631	1,103	8,734	100.0	100.0	100.0
Urban area	77	70	147	.04	17.1	.8
Built-on area	37	42	79	.02	10.3	.5
Roads, rivers, lakes			136			.8
Other uncultivable	16,926	299	17,224	99.3	72.6	97.9
TOTAL UNCULTIVABLE	17,039	411	17,586	100.0	100.0	100.0
TOTAL LAND	24,670	1,514	26,321	94.2	5.8	100.0

Source: Government of Palestine, *Village Statistics, 1943*, Jerusalem, 1943.

While no systematic study of the extent of the cultivable area of Palestine has been undertaken in recent years by the Government of Palestine, such a study *has* been made by the Jewish National Fund. It covers northern Palestine in great detail and proceeds upon the assumption that land amelioration is to be permitted, in accordance with the quality of the soil that can reasonably be expected to result from investment in amelioration, up to a maximum investment of 60 man-days in the amelioration of a single dunum. No examination is made of the magnitude of the market demand for the output from the ameliorated soil; it is presumed, without any detailed examination, that such output can be sold, in unlimited amounts, at about average prewar prices. The results of this study are presented in the following table:

JEWISH NATIONAL FUND ESTIMATE OF CATEGORIES OF PALESTINE LAND

(*Thousands of dunums*)

	Total area	*Cultivable area*	*Farm building, road, etc., area*	*Forest area*	*Waste area*
Plains	4,480	3,117	500	189	673
Hills	9,624	5,377	595	2,649	1,004
Negeb	12,215	2,025	225	250	9,715
TOTAL	26,318	10,519	1,320	3,088	11,392

Source: Unpublished data of J. N. F. contained principally in S. Lifschitz, *Categories of Soil in Palestine and Their Cultivation* and Joseph Weiz, *Designing a Regional Map of Palestine.* (Due to rounding, subtotals do not necessarily agree with totals exactly.)

There is a discrepancy of about 1,785,000 dunums between the estimate of cultivable area now used for tax purposes by the Government of Palestine and that derived by the investigations of the Jewish National Fund. A small part of this discrepancy is due to the more recent and more accurate measurements of the Fund. The larger part is due to a difference of concepts. The Government of Palestine has adopted a conception of cultivability wholly appropriate to current tax administration but irrelevant to development policy. The Jewish National Fund has adopted a definition of cultivability wholly consistent with its experience of land amelioration but assuming an unlimited demand for the output of ameliorated land.*

Some progress towards stating the issue of cultivability in meaningful terms was made in the testimony before the Peel Commission. On that occasion, a spokesman for the Jewish Agency (Dr. Maurice Hexter) explained: "The word 'cultivable' does not describe an inherent or absolute attribute of land, which determines the use to which it can be put. 'Cultivability' is not the independent determining factor, but is itself determined by the interaction of the physical properties of the land (including availability of irrigation waters) and the economic factors of production which are applied to it and modify it. To what extent factors of production can be applied depends on the economic progress of the country as a whole, including possibilities of special products, and can only be forecast from time to time. Land will be taken into cultivation or subjected to a more intensive or different form of cultivation as and when the supply of capital, labour, skill and available markets warrant it."

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* It must be made clear that the J.N.F. disregard of market considerations is a deliberate simplifying assumption. Such assumptions are justified, for methodological purposes. But results derived from investigations with such simplifying assumptions must not then be applied, without appropriate qualification, to the actual economic world.

This statement by the Jewish Agency poses the question of cultivability in meaningful economic terms. Yet it obscures one issue that is perhaps more significant than any which it clarifies. As indicated above, the margin of Jewish land purchase is not set by the point at which it will be possible to collect a rent which will just meet the going rate of interest.* The same is true of the margin of land improvement. A private business calculation of "cultivability" (such as Dr. Hexter describes above) would weigh the costs of land improvement, the other costs of farming, estimate the probable return from the resulting output, and would carry land improvement only to the point where it promised to yield as high a financial return as any alternate investment. This is *not* the Jewish procedure in estimating the extent of cultivable land in Palestine. Land is described as cultivable if it is believed that such land can be improved so as to support cultivators, at about the prevailing Palestinian standard of living, provided that an initial investment not utterly beyond the anticipated means of the Jewish community is made *without expectation of any return on that initial investment.* The extent of "cultivable" land becomes then a matter of national policy, not business judgment.

Soil amelioration by Jews in Palestine, like soil purchase, is not governed by ordinary considerations of business return on investment. It is governed by the determination to build a Jewish National Home and by the belief that a substantial number of Jewish farmers, working on the land, are necessary if the Jewish National Home is to be politically stable and psychologically healthy. Nevertheless there is, at any time, a perfectly rational method of determining how far it pays to go in ameliorating land. If, for instance, uncultivable saline land costs £P 5 per dunum and irrigable vegetable land costs £P 25 per dunum, it is a good investment to spend up to £P 20 per dunum on ameliorating the saline land if amelioration will convert it into the same grade of vegetable land. The Jewish National Fund's present formula permitting amelioration up to a maximum outlay of 60 man-days per dunum is a sort of rule-of-thumb application of this idea.

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* Depreciation is of course unnecessary in a perpetual asset like land, providing the properties of the soil are not depleted.

Land amelioration in the hills means uprooting large boulders, clearing small stones, clearing the ground of briers and brush, and terracing. In the sand dune area, it means levelling, fixing the dunes by planting trees as wind-breaks, and adding organic and other fertilizers. In saline soils, it means leaching until the harmful salts have been washed out and then adding fertilizer to restore the nutrient matter washed out by the same process. In all these ways, new cultivable soil is constantly being created in Palestine and can be created on a much larger scale if capital for the investment and markets for the output are available.

The importance of this process of soil amelioration, however, should not be overestimated by comparison with the complementary process of intensification through irrigation. In the sand dune area, the Jordan Valley, and the Negeb the two are indispensable concomitants. Only in the unirrigable hill country can soil be created which is of value without irrigation. Even if we were to accept the generous thesis that the equivalent of three million dunums of additional non-irrigable land—of a quality equal to the present average—might be created by basic amelioration of present waste lands and supplementary amelioration of low-grade cultivated lands, irrigation possibilities would still be far more important. Under Palestinian conditions, irrigation along with the more intensive use of labor and capital that goes with irrigated land means at least a quadrupling of the output economically obtainable from the average dunum of land. Therefore the irrigation of an additional 2 million dunums of land (the lowest responsible estimate of additional irrigation possibilities) would mean the equivalent of the creation of an additional area of 6 million dunums. These comparisons are too rough to have more than a broad suggestive value. They are, however, one of the bases for a fundamental conclusion of our study of Palestinian agriculture: the economic future of Palestinian agriculture will lie increasingly in its irrigated plains, not in the unirrigated hill country.

ARAB AND JEWISH FARM EMPLOYMENT

Palestine has many forms of agricultural labor and agricultural enterprise—hired herdsmen tending sheep and goats as in the days of Abraham, and receiving wages of a few pounds a year; miserable, backward Fellaheen, earning in peacetimes as little as £P 35 per family a year, if tenants paying as much as £P 15 out of this for rent, and paying an additional £P 5-10 per year as interest on farm indebtedness; modern Jewish farmers, using tractor and combine, studying the agricultural research bulletins of several countries, but working the land with their own hands and wresting from it a living which cannot have exceeded the modest standard of £P 100 per family, even for old-established and well-equipped farms, and even in the best peace years; large Arab and Jewish citrus plantations, organized like industrial enterprises, dependent on wage labor, and competing successfully in world markets. It includes a great variety of forms of social organization, from the most individualistic to voluntary communism.

As in other countries, the statistics of the "gainfully occupied" in Palestinian agriculture are woefully confused by the inability to determine any clear principle of counting or not counting female family labor in agriculture. Adjusting various official figures to the same basis (see page 144 above), the share of the gainfully employed accounted for by agriculture works out to about 59 percent in 1931, about 56 percent in 1939, and about 47 percent in 1942.

Shockingly little is known in Palestine about the magnitude of Arab farm employment. An able student of the Palestinian economy, Dr. Ludwig Gruenbaum, made a comprehensive balance sheet of the economic activities of the country in 1936: he concluded that about 162,000 non-Jews were gainfully occupied in agriculture in that year. Another able student, Mr. G. E. Wood (Government Statistician) made an equally comprehensive study for 1939. The actual change between 1936 and 1939 cannot have been as much as 10 percent, yet Mr. Wood concluded that about 248,000 non-Jews were gainfully occupied in agriculture.* Dr. Gruenbaum's investigation shows about 61 percent of the non-Jewish gainfully-occupied population in 1936 as being employed in agriculture; Mr. Wood's study implies for 1939 about 80 percent. This discrepancy affords a rough index of the ignorance of the Arab farm economy that prevails even among expert Palestinian economists.

Such statistical and descriptive evidence as is available suggests that even a relative trend of Arab occupations away from agriculture was only beginning to emerge in the 1930's and received its first substantial impetus from the demand created by the recent war. Up to 1940 the absolute numbers of Arabs employed in agriculture apparently increased year by year. In view of the comparatively stable dominance of agricultural occupations in Arab rural communities, the following table throws some light on this point.

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* Figure results from subtracting Jewish census figure from Wood's total. Wood's non-Jewish figure for 1942, by the same method, is 249,000.

NON-JEWISH RURAL POPULATION OF PALESTINE

	Census 1922	*Census 1931*	*Official estimate 1942*
Numbers	477,693	602,387	763,394
Percent of total non-Jewish population	71%	70%	67%

Source: *Statistical Abstract*, 1943.

The ratio of hired workers to independent operators in Arab agriculture is also very uncertain. In 1931 the Government census recorded 35,025 non-Jewish hired workers in agriculture. This was about one-fifth of the total non-Jewish agricultural employment (including unpaid female family workers). But in 1942 the Government Statistician estimated the total number of hired workers in agriculture at about 20,000. Since the Jewish agricultural census of 1941-42 showed 7,475 Jewish hired workers, the non-Jewish hired workers must have numbered about 12,500. The significance of these approximately 12,500 non-Jewish hired agricultural laborers for Arab agriculture is further reduced by the fact that perhaps four thousand of them were actually employed in Jewish citrus groves and vineyards. Other authorities disagree with the Government Statistician, contending that at least 20,000 Arab hired workers were employed in 1942 on Arab farms alone. Even this higher figure, however, would leave the broad outline unchanged: hired work is relatively unimportant in Arab farming. As in Jewish farming, it tends to be concentrated in citriculture. Other Arab farming is primarily family farming—whether of tenants or of peasant owners. It does not have the capital, the economic and social instability, or the amenability to change of a commercial agriculture based on hired labor and capitalist management.

The total number of Jews gainfully occupied in agriculture rose, according to the Jewish Agency's data, from about 4,000 in 1922 to 12,300 in 1931 and 37,000 in 1939. With the wartime collapse of citrus, however, employment fell to about 27,000 in 1941-42 and has risen only very slightly in 1943 and 1944. Due to the greater relative importance of citriculture in Jewish than in Arab farming, Jewish farms in Palestine have a greater proportion of hired workers than Arab farms. In the Jewish Agency census of 1941-42, Jewish hired workers in agriculture were enumerated at 7,475 (or 27.6 percent) out of a total of 27,114. In 1936, when citriculture was flourishing, about 37 percent of all Jews engaged in agriculture were hired workers. Capitalist farming, and particularly citriculture, has played a great role in training Jews in agriculture. The citrus groves have always had a great turnover of workers gaining their first acquaintance with agriculture. In 1941-

42, one-quarter of the Jewish hired workers were under age 25; two-thirds of them were under 35. Hired work for Jews in agriculture in Palestine is largely a transitional occupation; it is not a status.

ARAB FARM ORGANIZATION AND OUTPUT

The distinctive Arab agricultural unit is the Fellah * farm. It is a subsistence farm, generally between 50 and 100 dunums in cultivated area. There are perhaps 80,000 such farms in Palestine. Cereals are their most important product, accounting for 35 to 40 percent of the total value of output. Milk and meat production account for about 15 percent of output; animals are kept primarily for their milk, meat being only a by-product. Olives account for about 15 to 20 percent, fruit for perhaps 12 percent, vegetables for about 13 percent and poultry for about 5 percent.

These over-all averages must not be taken to suggest that most Fellaheen raise all these products. On the contrary, cereal villages are distinguishable from olive villages, though both may have a limited amount of livestock and a few chickens. Vegetable growing is concentrated in the plains and near towns. In a cereal village the Fellaheen may live almost entirely on bread, with a few olives, olive oil, and figs. The contribution of milk, meat and vegetables to their diet may be almost negligible.

The land of an Arab cereal village is commonly divided into two fields—one of which will be treated (in any one year) as the winter crop area and the other as the summer crop area. The winter crops are wheat, barley, lentils and kersenneh. The summer crops are durra (millet), sesame, certain vegetables and melons. Lands are cropped once a year or once in two years depending on the amount of rainfall and the depth and character of the soil. Little land is idle during the year when it is in the winter crop area. Summer crops need deeper soils, more rainfall, and a plowing season free for the right intervals from rain so that summer plowing can be done. For these reasons, much land is idle when it is in the summer crop area.

The Fellah plows in land which is moist below the surface after rain but dry enough to be loose and free of clods. He plows only once for winter crops, but three times for summer crops. Summer crops are regarded, in large part, as an investment in improving the land so that it will bear better winter crops. For this reason, the Fellah who leases land or owns it jointly prefers to make all his land commitments for a minimum period of two years and

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* "Fellah" may be translated peasant. It is a term of social derogation as well as of economic status.

after a winter crop has been grown on the land: then the new occupant will be able to grow both a summer crop and a winter crop.

The village cannot permit each Fellah to make his own decision about what land is to be used for winter and summer crops because that would make organized summer grazing impossible. In the dry Palestinian summers, grazing on the stubble left after the harvest is most important. As soon as the winter crop area is harvested, the livestock is allowed to graze there and similarly later on the summer crop area. Were the summer and winter crops not laid out in single fields, such grazing would be impossible.

In addition to his owned or leased land, the Fellah has a few sheep and goats, a dozen chickens, two cows or oxen, or two diminutive donkeys, occasionally a camel. Cows are preferred, especially where plowing is on lighter soils, because the cow's milk (about 250 litres, or 264 U. S. quarts, per year) and calf are about equal in value to the cost of her feeding stuffs. Oxen are used in heavy soils, camels also occasionally, mules only by large farmers who can use them also for transport in the non-plowing season. The traditional plow is wooden with an iron tip. It breaks the soil and permits the entry of water but no more. When a more thorough job of killing weeds, breaking up clods and opening the soil to the entry of water is desired—as for the summer crops—the land is plowed more than once.

The Fellah's house may be of baked mud and thatch or of stone. It is commonly unfloored and practically unfurnished. He has no farm buildings. The total investment in his farm (apart from land value) prior to 1939 was, perhaps, £P 70. Human labor is the chief resource input. Rent is almost always paid in kind and is most commonly equal to two-fifths of the produce. In 1930 the official Johnson-Crosbie Report, after a rapid survey, estimated the average annual income from such a farm as £P 35 for a family owning the land or £P 20 for a tenant family. Later evidence suggests that this estimate was too high for 1930 but may be approximately correct for the situation a decade later. In any case, this income was not entirely available for the Fellah's own use. He had to pay interest at an average rate of about 30 percent on an average indebtedness that may be conjectured at between £P 25 and £P 30.

This backward condition does not mean that there was no Arab agricultural progress under the Mandate. On the contrary, the progress was great. Without profound changes, Arab agriculture would not have succeeded in supporting about 700,000 people in 1944 as compared to about 400,000 a quarter century earlier —and supporting them at a higher standard of living. The area cultivated by Arabs was increased from about 5 million dunums in the 1920's to about 7 million at the present time. There has been increasingly more emphasis on cattle and less on sheep and goats, also an expansion of poultry, vegetables, and olive and fruit production. The large additional planting of olives, vines, and fruit trees and the great increase in vegetable production are particularly sure indicators of greater prosperity, urban markets, and the greater security which leads the Arab to plant trees the fruit of which can be enjoyed only in the distant future. The following table gives a few striking statistical measures of this progress:

EXPANSION OF ARAB AGRICULTURE, 1921-43

Annual average of years	*Output of olives (tons)*	*Output of vegetables (tons)*	*Heads of cattle*	*Heads of donkeys*
1921-26	17,000	11,000	102,000	32,000
1933-38	26,000	60,000	120,000	75,000
1939-43	47,000	160,000	215,000	105,000

Source: Adapted from figures published by the Government of Palestine and the Statistical Department of the Jewish Agency. Livestock figures are for 1921, 1934 and 1943. All figures rounded to nearest thousand.

Arab agriculture underwent no structural changes under the impact of World War II. According to the estimates of the Government Statistician, the number of people in agricultural work remained practically stationary at a level just below 250,000 from 1939 to 1942, and the quality of the labor force decreased as women took the places of men drawn away into military construction, transport, and manufactures. Farm prices rose, under the pressure of war demand and war inflation, to about five and one-half times the 1939 level. Output expanded by about 15 percent.

The output actually offered for sale rose only from about 33 percent of total production in 1935-39 to about 34½ percent in 1943-44. The Fellah was better off, and so he ate more. Moreover since the Arab urban community was also better off, Arab farmers had almost no produce to sell on Jewish markets. As a matter of fact, several thousand tons of Jewish produced potatoes were sold on Arab markets. The Arab farmers accumulated substantial profits, but—with the exception of the purchase of a few dozen tractors—they undertook no striking mechanization. Progress was along the traditional lines—planting more olive and fruit trees, more summer field crops, and accumulating more cattle and poultry. The following table gives a picture of Arab agricultural output, apart from citriculture, in the crop season before the end of the war in Europe:

ESTIMATED PRODUCTION AND SALES OF ARAB AGRICULTURE, 1943-44

	Unit	*Production*	*Withdrawn from stocks*	*Value (at prewar prices) £P*	*—Amount marketed—*	
					Value	*% of available supply*
Wheat	tons	70,000	+5,000	637,500	127,500	20
Barley and durra	tons	80,000	+40,000	660,000	82,500	12.5
Olives	tons	75,000	−15,000	900,000	300,000	33.3
Vegetables	tons	90,000		540,000	210,000	39
Potatoes	tons	10,000		60,000	36,000	60
Fruit	tons	70,000		560,000	160,000	28.5
Meat	tons	10,500		472,500	157,500	33.3
Cow's milk	million litres	45		405,000	108,000	26.5
Goat's and sheep's milk	million litres	24		264,000	132,000	50
Eggs	millions	76		133,000	70,000	52.5
Poultry	tons	4,000		260,000	130,000	50
TOTAL				4,892,000	1,513,500	31
TOTAL, ELIMINATING DUPLICATION OF FODDER FOR LIVESTOCK				4,397,000	1,513,500	34.5
Other				*	272,500	
TOTAL MARKETINGS					1,786,000	

Source: Dr. Ludwig Samuel, unpublished study of February 12, 1945; necessarily somewhat conjectural in detail.

*Value of output is not available for minor commodities.

JEWISH FARM ORGANIZATION AND OUTPUT

Jewish agriculture includes three main forms of social and economic organization. These are the Moshavot, or private villages, with what we shall call individual farming; the Moshavim, or cooperatively operated villages, with what we shall call cooperative farming; and the Kibbutzim or Kvutzot, collectively owned villages, with what we shall call collective farming. Each of these village forms signifies a mode of life as well as a way of organizing farm operations, and none is exclusively agricultural. In 1941-42, about 29 percent of all employment in private villages was agricultural, compared to 53 percent in the collective villages, and 72 percent in the cooperative villages.

The following table gives a general indication of the relative importance of these three basic social forms in Jewish agriculture.

Individual farming has been the most important economic form in Jewish agriculture in normal times, whether measured by amount of employment, value of investment, or value of output. By far the most important branch of individual farming is citriculture. In 1941-42 citriculture was in distress due to inability to get shipping to carry its exports. There is every reason to believe that, in the immediate postwar years, this preeminence of citriculture will be restored.

SOCIAL FORMS IN JEWISH AGRICULTURE, 1941-42

	Number of villages	*Population of villages*	*Number employed in agriculture*	*Total area occupied by farms (dunums)*	*Irrigated area occupied by farms (dunums)*
Individual	46	68,301	8,290	310,375	118,851
Cooperative	90	23,566	9,151	201,137	41,633
Collective	86	27,967	8,349	281,691	42,941
Other	14	14,442	1,224	9,454	4,304
TOTAL	236	134,276	27,114	802,657	207,729

Source: Jewish Agency, *Census of Jewish Agriculture,* 1941-42. The "other" consists of agricultural schools, semi-urban settlements, and workers' quarters.

The individual farm may also be called a "capitalist" farm, but we have avoided this term because it suggests great size. In 1941-42, there were 5,017 farms in the Jewish individual farming class. They therefore occupied an average area of less than 62 dunums or 15.3 acres. It is misleading to call this a capitalist farm without further qualification. It is the farm of a small capitalist, owning his own land and operating it with a few hired laborers—especially in the picking season—or renting it to another small operator. In the census of 1941-42, some 2,700 out of 5,017 Jewish individual farms had a resident owner.

Second in importance in Jewish agriculture, after individual farming, is cooperative farming. About four-fifths of all cooperative villages are on land owned by the Jewish National Fund. Even where the land is owned privately, the areas involved are so small as to preclude any great capital gains through appreciation in land values. The cooperative farms employ little hired labor except in times of great pressure. The land area of each farm in the village tends to be of approximately the same size. Dairies, storage places, and large farm machines are owned cooperatively. Frequently some field work is done cooperatively, and agricultural purchases and sales are almost always cooperative. Houses are designed for individual families and commonly stand on individual garden plots. The houses—as nearly always among both Jews and Arabs in Palestine—are concentrated in villages, not spread out among the farmers' fields. The cooperative farmer works for his own account, makes his own savings, and determines his own expenditures. There were 4,432 cooperative farms in 1941-42, occupying an average area just over 45 dunums or 11.2 acres.

The most discussed form of Jewish agriculture is the collective farm, known as a Kibbutz or Kvutza. Its members have no private property and no private accounts. They elect their own managing officers and decide all community matters by a majority vote. All members share in the Kvutza's income in accordance with their needs, but they receive no cash payments. The children of the Kvutza are brought up at the expense of the community and do not, in any way, constitute an economic burden on their particular parents. Living, as well as working, tends to be collective. The members live in several-family houses, generally with individual rooms for married couples. The children live in separate children's houses, though in daily contact with their own parents during the parents' leisure hours. The members eat in a large community dining hall, which serves also as the hall for the "town meeting". Their community buildings are grouped closely together and commonly include a library, a school, and—in the larger settlements—a medical unit with special facilities for the sick.

The collective settlements are, with several exceptions, on Jewish National Fund land. In 1941-42, they had an average farm area of 34 dunums, or 9.4 acres, per person employed in agriculture. They ranged in population, in 1943, from about 1,200 for Yagur to 60 for Kfar Etzyon. The collective settlement is misconceived when it is regarded as wholly, or even primarily, a method of farming. It is a way of life, bringing together people who often share the same political and religious (or non-religious) outlook, in an organization which provides them with security through numbers and through a variety of employments. The Kvutza has been attacked because it operates without the incentive of individual profit. On the other hand, it has been defended as the full realization of a democratic, non-exploitative society. Some persons find, in its close associations, a human warmth lacking in any other form of society. Others find its forced gregariousness stultifying and depart in search of a more private personal life. Members are, of course, always free to go, but they have no property (beyond their own clothing and a voluntary separation allowance) that they can take away.

The organization of the Kvutza, with ability to rotate tasks during the day among a large number of persons, has meant substantial adherence to the ideal of an eight-hour day. Since the Kvutza is a sizable group, it is economical for the community to provide most of its own services. With all due allowance for these factors, the labor supply available for productive work (i.e. work apart from household services) seems low. During the immediate prewar years, mature collective settlements got about 345 productive working days a year out of every two adult persons (as against a gross total of 730 days available). At that time, about 190 working days per adult couple were spent in household work. During the war years, the ratio of children has risen. In 1943-44 an adult couple yielded only about 305 productive working days, while 230 were spent in household work.

Even in 1941-42 only 53 percent of the gainfully employed members of collective groups were occupied in agriculture. The further expansion of collective industrial undertakings since then probably means that the percentage in agriculture today is somewhat lower. The Kvutza is, nevertheless, a great institution for training people in agriculture. Urban people, or people incapable of operating a farm of their own, can become productive agricultural workers in a Kvutza. They can specialize, and they can work in association with people who know more. The morale of the member of a Kvutza is commonly much higher than that of the hired worker of an individual farmer. The member of a Kvutza is working for himself; he is the equal of all other members in social standing, even if he is not yet very skilled. He is secure. He will not be expelled from the Kvutza except for continued non-cooperativeness. For these reasons, the collective settlement has powerful points of attraction to the Jewish worker. Any large-scale expansion of agriculture, with relatively unskilled labor, will find the Kvutza a ready social instrument.

OCCUPATIONAL STRUCTURE OF COOPERATIVE AND COLLECTIVE FARMS, 1941-42

	Total population	*Percent under age 17*	*Percent gainfully employed*	*Number in agriculture*
Cooperative farms	23,566	33%	54%	9,151
Collective farms	27,967	21%	56%	8,349

Source: Jewish Agency, *Census of Jewish Agriculture*, 1941-42.

There is intense controversy in Palestine between those who claim social and economic superiority for the cooperative (Moshav) and those who give the palm to the collective (Kibbutz). Due to the cooperative use (and joint ownership) of large machines, capital costs are no higher in cooperative farming than in collective. The only clean-cut case of higher cost is in housing, where the higher expenditure in the cooperative reflects a higher standard of housing accommodation as well as the higher cost of building many separate units. Students with no doctrinaire bias in favor of either social form record that a cooperative farm unit, though having representatively more children than a collective unit,* often is able to supply

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* A "unit" is nominally man, wife, and average number of children, but adult unmarried persons are included in the averaging.

400 man-days of productive work per year, while representative mature collective farms now (1944) are better than average if they achieve 320.

It seems remarkable that the cooperative villages with 12 percent more of their total population under age 17, should have had only 2 percent less gainful employment. This reflects the greater frequency with which women in the cooperative villages work in the fields as well as care for the children. Moreover it seems to be true that longer hours are worked in the cooperative villages. The representative cooperative farmer is older than the collective farmer. He has more experience in agriculture—and, indeed, is frequently a "graduate" from a collective settlement. For these reasons, it may well be that the cooperative farms are currently the more productive.

Basic information on Jewish patterns of land use and the associated capital requirements is presented in Table 8. This information cannot be pressed with mathematical nicety. It is based primarily on the experience of 23 collective farms established before 1930 and having, at the present time, a total settlement area of about 100,000 dunums and an investment (apart from cost of land) of over £P 2,000,000. Table 8 does not constitute a mere historical summary of the experience of those settlements. They made investment errors, which are known and can now be eliminated. Moreover these land areas and their related capital requirements are not fixed for all time. They reflect the present state of Palestinian agricultural methods. Finally, the elements presented in this table cannot be combined in a mechanical way. They must be fitted into a rotation that conserves the soil and into a time-table of operations that does not call for ten men in June and only one in January. The man-year of 300 working days must mean, as nearly as possible, full employment for one man, not part-time employment for several.* One realistic combination of activities for a large farm is shown below.

The table on page 204 illustrates a farm as intensive in its land use as the average collective or cooperative farm in Palestine today. But it still has great possibilities of further intensification. Nearly two-thirds of the total land area is taken up in unirrigated field crops that employ only 7 percent of the labor. This semi-intensive pattern reflects the fact that irrigation water has been lacking hirtherto to permit more intensive use. Within the limits of a rational rotation, giving full attention to the conservation of the soil, the area given over to unirrigated field crops and fallow can be reduced, safely, in this type of farm, to about one-third of the total cultivated area.

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* This condition is of course subject to modification in so far as hired seasonal labor is available, young people can work in some seasons when they are not at school, industry and agriculture can be emphasized alternatively in collective settlements, etc.

LAND AND CAPITAL PER WORKER OF A LARGE FARM IN THE COASTAL PLAIN

Farm activity	*Land that would be required per worker if the worker spent 300 working days per year in this activity, sown area (dunums)*	*Capital that would be required per worker if the worker spent 300 working days per year in this activity, at prewar prices £P*	*Actual per cent this activity in total time spent in farm work*	*Actual land required per worker, sown area (dunums)*	*Actual capital required per worker, at prewar prices £P*
Unirrigated field crops	400	585	7	28.0	41
Irrigated fodder crops	65	700	15	9.8	105
Irrigated vegetables	12	180	23	2.8	41
Bananas	20	500	2	0.4	10
Grapes	17.5	515	6	1.1	31
Citrus	8.6	550	15	1.3	83
Deciduous fruit	15.0	610	2	0.3	12
Dairy		725	9		65
Poultry		680	15		102
Bees and other		490	6		29
TOTAL			100	43.7	519

Source: Unpublished studies of Dr. L. Loewe and Dr. L. Oppenheimer. The farm type in question might be found particularly in the coastal plain between Natanya and Hadera.

Jewish intensive farm types have been designed predominantly with a labor requirement of 360 to 400 working-days per farm unit, as compared with the 300 working-days per year used above as a basis of calculation. A diversified, fully intensive farm, with a labor complement of 360 to 400 working-days, required about 30 dunums of irrigable plain land. About four dunums are required for internal village roads and in space for houses, barns, and community buildings. The remaining 26 can be cultivated. Of the 26, in a representative fully-intensive farm, about 4 might be in plantations, 13 in irrigated crops and 9 (taking their turn in the rotation) in unirrigated crops. Of the irrigated land, a physical area of 2 to 3 dunums would be in vegetables and 10 to 11 dunums in fodder crops. Such an intensive farm would have more emphasis on dairying and less on unirrigated field crops than the semi-in-

TABLE 8: LAND AND CAPITAL REQUIRED PER AGRICULTURAL WORKER IN PALESTINE, IN VARIOUS FARM ACTIVITIES

			Capital required in £P, at prewar prices								
Farm activity	*Region or other specifications*	*Land required sown area (dunums)*	*Farm buildings*	*Water works and pipes*	*Sprinklers*	*Machinery and other equipment*	*Draught animals*	*Livestock*	*Plantations*	*Revolving capital*	*Total Required to equip a worker spending 300 man-days per year exclusively in this farm activity*
Unirrigated field crops	Esdraelon	365	120			265	11			195	590
	Coastal	400	130			280	12			165	585
	Jordan	475	155			330	14			170	670
Irrigated fodder crops	Open irrigation	60	6	210		108	18			55	395
	Sprinklers	65	6	260	260	115	20			60	720
Irrigated vegetables	Open irrigation	11.5	11	40		23	2			65	140
	Sprinklers	12.5	12	62	38	25	2			70	210
Citrus		8.6	4	60		52			360	75	550
Deciduous fruit		15	4	100		90	3		330	85	610
Grapes		17.5	5	105		120	3		210	70	515
Bananas		20	10	60		60	4		134	150	420
Dairy	8.6 milk cows		170			17		350		130–215	665–750
Poultry	700 laying hens, Oct. 1		315			105		140		120–155	680–715
Sheep	81.0 milking ewes		32			8		130		65	235
Bee-keeping	13.6 bee-hives		3			272		136		80	490
Olives		25				5	2		250	50	307
Fish-ponds		30	300			30		30		100	460

Source: Unpublished studies of Dr. L. Loewe and Dr. L. Oppenheimer. Based primarily on corrected experience of Jewish collective farms. Physical area greater than sown for unirrigated field crops because part of field rests unsown; sown area greater than physical in irrigated vegetables and fodder because part of land sown twice or more a year. The fish-ponds are artificial; hence the expenditure under "buildings." The revolving capital required in dairying and poultry depends on the share of home-grown feeding stuffs. Capital for housing excluded.

tensive one outlined in the table above. Its capital requirements per worker would be about (at prewar prices) £P 625. For a family with a working complement equivalent to 360 to 400 man-days per year this would mean a capital outlay of from £P 750 to £P 813—apart from land cost and housing.

In stipulating that this capital is "required", we do not mean that farming is impossible without it—even without the lower "requirements" for semi-intensive farming. On the contrary, most Jewish farming in Palestine has actually operated with less—with the result of low per capita income. Intensive farms with full equipment would yield, for experienced farmers and at prices like those prevailing in 1935-39, about £P 90-100 per worker gainfully occupied in agriculture. This £P 90-100 is before any payments of interest or repayment of borrowed capital.

In the prewar period many settlements reckoned £P 0.200 per working day (or £P 60.0 per year) as their minimum labor cost, but they often showed losses. For 1936, Dr. L. Gruenbaum's studies show an income of only £P 53 per Jewish person gainfully occupied in agriculture. Many farms were badly underequipped. The farmers lived on what has been called the "bread and tea standard".

JEWISH FOOD PRODUCTION FOR HUMAN CONSUMPTION, 1938-39 TO 1943-44

Commodity	*Unit*	*1938-39*	*1942-43*	*1943-44*
Cow milk	Millions of litres	34	55	60
Meat	Tons	1,030	1,670	1,800
Sheep milk	Millions of litres	0.28	1.0	1.25
Eggs	Millions	60	65	65
Poultry	Tons	1,400	1,500	1,600
Vegetables	Tons	15,000	21,500	17,500
Potatoes	Tons	3,000	10,000	23,000
Apples	Tons	275	1,250	1,650
Pears	Tons		150	300
Plums	Tons	225	900	1,350
Bananas	Tons	2,200	3,000	3,500
Table-grapes	Tons	3,000	2,700	3,500
Wheat	Tons	10,000	11,000	14,000
Value at prewar prices		£P 1,023,000	£P 1,467,000	£P 1,647,100
Value of commodities omitted		66,000	147,000	165,000
TOTAL VALUE		£P 1,089,000	£P 1,614,000	£P 1,812,100
INDEX		100	148	166

Source: Unpublished study by Dr. Ludwig Samuel, Feb. 12, 1945. Commodities not specifically listed include fish, wine-grapes, honey, etc.

Only the favorable price development of the war years has enabled the bulk of Jewish farms to improve their equipment sufficiently to approach the semi-intensive type of farm described above. It is this improvement in equipment that explains the increase in Jewish mixed farm (i.e., all farms except citrus) output by 66 percent during the war years, while Jewish employment in mixed farming has remained practically stationary.

If we group the final output of Jewish farming in 1943-44 into main branches, disregarding citrus, about 38.7 percent of the total consisted of dairy products, about 20.5 percent of poultry products, about 15.4 percent of vegetables and potatoes, 7.8 percent of fruit, 7.6 percent of wheat, and 10.0 percent of other products. This is a very different distribution of emphasis than in Arab agriculture, where cereals and olives are the two most important crops. Jewish agriculture is oriented towards supplying the needs of urban consumers, not towards self-sufficiency on the farm. In 1943-44, Jewish farming sold about 75 percent of its total output on the market compared with about 35 percent sold by Arab agriculture.

CITRICULTURE

Palestine's most commercial agricultural enterprise, however, is citriculture. In citrus fruits, Palestine's production is necessarily oriented towards the demands of purchasers in distant countries. Before World War II, her domestic consumption of citrus fruits accounted for only about 9 percent of her total output. Other major citrus producers could count on much larger domestic markets; Spain consumed about 20 percent of her own output, Italy 63 percent, and the United States 93 percent.

Some soils and climates in Palestine have proved ideally suited to the growth of citrus fruits ripening in the winter and spring. Freedom from frost gives Palestine a great advantage over California and Spain. There is some damaging wind, but the damage is not remotely comparable to that of Florida. By comparison with other citrus areas, Palestine is remarkably free of pests. In the citrus belt, irrigation water is abundant and fairly cheap. The soils and climate produce rapid growth, prolific yields, and citrus fruit of a quality unmatched elsewhere in the Mediterranean and matched only rarely in other parts of the world.

Orange groves are commonly planted with a density of about 240 to 320 trees per acre in Palestine; a low planting density is 160 trees and a high one 400. These densities compare with 60 to 100 trees in the United States. The denser planting reflects the dominance of hand labor (including basin irrigation) in cultivating Palestinian groves; trees are commonly planted too densely to allow passage-way even for a small tractor. Moreover dense planting produces high yields quickly (the trees reaching their maximum size very soon), though it shortens the life of the trees. An officer of the U. S. Department of Agriculture has estimated that Palestinian orange groves with trees twelve years or more old yield about 475 U. S. boxes per acre; California yields are 200 to 220 boxes, and Florida yields are smaller. A commonplace yield in Palestine groves (including all trees over 5 years old) during peace years was 280 cases* of exportable† fruit per acre; a satisfactory yield, in a Jewish grove, was 320 to 360 cases, while an expertly managed grove would yield over 400 cases per acre. These yields are much higher than those achieved in any other considerable citrus region of the world.

M. H. Sachs, an expert citriculturist with first-hand knowledge of growing conditions in the United States and Palestine, has estimated that—in peacetime—operating costs in Palestinian citriculture were perhaps the lowest in the world. "I am firmly convinced that our industry can be brought to the stage of producing Jaffa oranges at an average cost in full bearing groves of 80 to 100 mils‡ and grapefruit of 50 to 70 mils per packed case; . . . production costs elsewhere . . . average between 100 and 150 mils for oranges, though California costs reach 200 mils, and about 100 mils for grapefruit, though Florida costs are sometimes as low as 50 mils." These comparisons, of course, reflect prewar price levels.

Until about 1936, citriculture was so profitable that planting expanded rapidly. Palestine's total area under citrus rose from 30,000 dunums in 1918 to 299,500 in 1937. The following table shows the distribution of the citrus area in 1938.

PALESTINE'S CITRUS AREA, BY OWNERSHIP AND VARIETY, 1938

	Shamouti oranges*	*Grape-fruit*	*Lemons*	*Miscellaneous varieties*	*Total*	*Percentage*
Jews	115,000	30,000	3,000	7,500	155,500	51.9
Non-Jews	127,500	7,500	2,000	7,000	144,000	48.1
TOTAL	242,500	37,500	5,000	14,500	299,500	100.0
PERCENT	81.0	12.5	1.7	4.8		100.0

Source: Unpublished study on the citrus industry, by Dr. L. Pinner and B. Schur.
*Also known as "Jaffa."

Even in the 1938-39 season about 100,000 dunums of citrus groves were too young to make any contribution to the output of exportable fruit. About 110,000 dunums were of full-bearing age and about 90,000 dunums consisted of immature groves.

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* The case had a net weight of just under 74 pounds.

† Non-exportable grades about 17 percent of exportable.

‡ The £P consists of 1,000 mils; a mil is therefore currently 0.4 U.S. cents. See Chapter 19.

Total Jewish investment in citrus groves up to 1939 may be estimated at about £P 10.8 million (apart from land cost). Total non-Jewish investment was only about £P 6.0 million (reflecting poorer installations and lower labor costs). The land of the citrus groves was valued at about £P 13 per dunum. Therefore the total investment in the groves, including land used, was of the order of £P 20.7 million.* This was a larger amount than the total invested at that time in all of Palestine's industries.

A careful study by B. Schur indicates that in the 1938-39 season, Jewish citriculture accounted for an employment equivalent (both in and out of groves) of about 20,000 man-years and a wage bill (including wages of self-employed) of about £P 1,274,000. The non-Jewish sector may have employed about 15 percent less labor † and at wage rates roughly 55 percent of the Jewish ones. Allowing for this factor, the total direct and indirect wage bill of Palestinian citriculture in 1938-39 may be estimated at approximately £P 2 million. Citriculture accounted for 7 or 8 percent of Palestine's total gainful employment and about 10 percent of her national income.

The Palestinian citrus groves are owned primarily by small farmers and middle-class people of moderate means (though, in the case of the Jewish groves, there are hundreds of owners living outside of Palestine). In 1942, when the area under citrus had fallen to about 274,000 dunums, there were 11,200 groves with about 10,000 grove owners. The average Jewish grove was about 22 dunums and the average non-Jewish about 35 dunums. Fully 88.4 percent of the total number of groves, accounting for 53.0 percent of the total citrus area, were under 50 dunums (12.4 acres).

CONTRIBUTION OF CITRUS TO PALESTINE'S EXPORTS, 1927-39

Year	*Total exports (Thousands of £P)*	*Citrus exports (Thousands of £P)*	*% Citrus of total*
1927	1,900	814	43
1931	1,572	886	56
1935	4,215	3,131	74
1939	5,118	3,811	74

Source: *Statistical Abstract* (various issues).

The quantity of the citrus exported rose from 307,000 cases in 1919-20 to 7,281,000 in 1934-35 and 15,310,000 in 1938-39. Taking the last three pre-war seasons together, Jewish production accounted for nearly 64 percent of total exports. By value, fresh citrus fruits accounted for about three-quarters of Palestine's total exports in the late 1930's.

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* The margin of error is perhaps 15 percent.

† Due to their 7.5 percent smaller area, lower cultivation standard, and lower yield.

Until the 1936-37 season, almost all Palestinian growers earned handsome profits. After then, only very well managed groves (or groves with exceptionally good soil or other special advantage) were able to pay operating costs, interest on investment, and a small profit. The following table gives a simplified picture of the cost-price development in the years 1932-39.

COST, PRICE AND RETURN PER CASE OF SHAMOUTI ORANGES, 1932-33 TO 1938-39

(Palestine mils)

Season	*Cost of cultivation*	*Cost from tree to ship*	*Cost from f.o.b. to free quay England*	*Total Operating Cost*	*Price realized in England*	*Return Per Case*
1932–33	120	170	200	490	658	168
1935–36	120	170	200	490	605	115
1936–37	120	170	200	490	555	65
1937–38	120	170	200	490	525	35
1938–39	120	170	200	490	500	10

Source: Dr. L. Pinner and B. Schur.

This table may be said to reflect the position of an average Jewish grove with a full-bearing yield of 75 cases of exportable fruit per dunum. Such a grove would represent an investment of about £P 83 per dunum (including land). With a return of 168 mils per case, such a grove would earn the handsome amount of £P 12.6 per dunum. But with a return of 10 mils per case it would earn only £P 0.750 per dunum, or less than 1 percent on the invested capital. Only Arab groves, with very low labor costs, and exceptionally well-managed Jewish groves earned a substantially higher return than this in the 1938-39 season. Arab groves typically operated with a lower investment per dunum, lower labor costs, lower yields, but also lower unit costs per box yielded than Jewish groves. In times of good prices, Jewish owners made much larger profits per dunum than Arab ones, but the Arab owners were better able to withstand price declines.

The most important reason for this decline in the profitability of Palestinian citriculture was her defenseless trade position.* The negotiated international trade systems of the 1930's placed her under an extreme disadvantage because she was not allowed to negotiate. As a country with a great excess of imports, Palestine could easily have made "deals" securing equal treatment for her citrus exports, but British policy (while denying Palestine the advantage of Imperial Preference) required that Palestine make no "deals" but give equal treatment to imports from all countries—even to those countries that discriminated against Palestine's exports. So Palestinian trade policy was forced along a hard and narrow path of traditional virtue—a path from which the United Kingdom and the self-governing dominions had long departed. Due to this policy, Palestine lost large citrus markets in France, central Europe and eastern Europe—a large part of the markets with respect to which she has locational advantages. Palestine's rapidly expanding output came to be concentrated on a few markets, with resulting sharp price declines.

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* For more extended discussion, see Chapter 20 below.

In the 1938-39 season, the United Kingdom took 60.0 percent of Palestine's orange exports, Holland 11.5 percent, Belgium 6.5 percent and Scandinavia 9.5 percent, but all the rest of Europe took only 11.9 percent. All the European countries with a comparatively liberal trade policy showed spectacular increases in the import of Palestinian oranges in the four seasons from 1934-35 to 1938-39. The United Kingdom increased her purchases by over 70 percent, Holland four-fold, Belgium eight-fold, and Scandinavia five-fold. For brief periods, when for special reasons Palestine was able to secure equal treatment, similar increases were recorded in France, central Europe, and eastern Europe. Had these markets remained open, Palestine would have been able to sell all her output at quite profitable prices. With their extreme restrictions, the margin of profit almost disappeared—except for groves managed with less than average costs.

Had the return earned per case in the 1938-39 season prevailed for the next six years, there would have been little new citrus planting but also probably little uprooting of existing groves. The planted area, which produced an exportable crop of 15.3 million cases in 1938-39, would have produced over 22 million cases * in the 1944-45 season. The shortage of shipping however has had a catastrophic effect on Palestine's citrus exports. Particularly after Italy entered the war, almost no shipping was made available for exports of citrus. In 1941-42, total citrus exports (including bulk shipments) were equivalent to only 0.6 million prewar cases and in 1942-43 only 1.3 million prewar cases.

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* A very modest estimate taking into account the fact that 12.5 percent of the planted area consisted of the high-yielding grapefruit.

Even for the 1944-45 season, when the shipping situation had greatly improved, exports may be estimated at the equivalent of only about 4.8 million prewar cases.

The Government of Palestine has recognized the difficulties of the citrus growers by granting them loans to maintain the groves. The loans from 1940-41 through 1944-45 total £P 20.8 per dunum as a maximum for a grove that received the full amount of all loans. Loans were, however, in fact extended to rather less than two-thirds of the planted area. The estimated total amount of these loans at the end of 1944 was £P 3.0 million. The loans sufficed to pay only about half the maintenance costs even with respect to the areas receiving loans. About 40,000 dunums of citrus had consequently been uprooted or abandoned up to the end of 1944. At least 10,000 dunums more will probably be given up. The following table indicates the composition of the 250,000 dunums of citrus groves which seemed, at the end of 1944, to be in a condition to survive:

ESTIMATED PALESTINE CITRUS AREA, BY OWNERSHIP AND VARIETY, 1944

(*Dunums*)

	Shamouti oranges	*Valencia oranges*	*Grape-fruit*	*Lemons and other*	*Total*	*Percent-age*
Jews	87,000	13,000	12,000	8,000	120,000	46.7
Non-Jews	115,000	6,000	4,000	5,000	130,000	53.3
TOTAL	202,000	19,000	16,000	13,000	250,000	100.0
PERCENT	80.8	7.6	6.4	5.2		100.0

Source: Unpublished study by Dr. L. Pinner and B. Schur.

The groves that have been (or will be) abandoned represent an investment loss of about £P 3 million. Arrears of maintenance are of the order of £P 2.5 million. Moreover, in the six seasons of the war, the grove owners spent (exclusive of the interest on debts) perhaps £P 8 or £P 9 million more on the maintenance of the groves than they received from the sale of their fruit. Since Arab grove owners were representatively in a better position to make the requisite additional outlays, a smaller area of Arab groves has been abandoned than of Jewish groves. Moreover, in relation to their pre-war standard, the Arab groves still planted are in better condition than the Jewish groves. All Palestine, however, entered the postwar period with groves in greatly deteriorated condition—though ideally suited to the country's soil and climate.

THE WAR AND FARM INCOMES

With the outbreak of war, and the pressure on food supplies and shipping, the Government of Palestine found it necessary to develop a comprehensive food policy. The aims of this policy were reduction of food imports, equitable supply of necessities to all consumers, and stability in prices. Restriction of imports was achieved. There were some stringencies of supply, especially in 1942 and 1943, but Palestine did not suffer extreme food shortage. Prices, however, failed to be stabilized; by 1944 farm prices had, in fact, quintupled as compared with prewar years.

This price revolution has been of the greatest consequence to the Palestinian economy. It has meant a high cost of living for urban consumers and a correspondingly high cost structure for urban enterprises. It has provided the Arab Fellaheen with money to free themselves from the burden of debts which they have carried for centuries. It has facilitated a two-thirds expansion in Jewish mixed farming output and has brought about a substantial rise in the standard of living of the Jewish farming population.

The following table gives the estimated rise in prices of agricultural produce on the farm. It must be emphasized that, in view of the widespread evasion of price regulations, this table contains a considerable conjectural element.

PALESTINE FARM PRICES, 1938-39 TO 1943-44

	Arab agriculture	*Jewish agriculture*
1938–39	100	100
1941–42	320	220
1942–43	450	340
1943–44	560	460

Source: Unpublished study of Dr. Ludwig Samuel.

The greatest price increases occurred in the characteristic Arab products, particularly cereals, olive oil, the small Arab eggs, and mutton.

Wheat was sold in the 1943-44 season at prices as high as £P 50 per metric ton (or $5.54 for a U. S. bushel). When the Government of Palestine attempted to establish legal prices of about half this magnitude, the Arabs smuggled their wheat into Transjordan and sold it from there to the Government of Palestine. The Government was quite aware of this practice but lacked the prestige to command a large measure of compliance without open coercion and was fearful of the consequences to public order of resorting to extreme measures. The wheat price was of critical importance for the prices of other agricultural produce because it served as a reference point for determining the prices of fodders and feeding-stuffs for dairies, livestock and poultry.

It is estimated that with a real standard of living held constant at the prewar level, Arab farming (apart from citriculture) realized net profits of perhaps £P 8.0 million in the four agricultural seasons 1940-41 to 1943-44. All such estimates, however, have a large margin of error. Broadly speaking, on the other hand, it *is* clear that the Fellah realized enough cash to pay off his debts and accumulate substantial savings. This profound revolution in the Fellah's financial status was accomplished with a rise in real output of only 15 percent.* The price development that made this possible is suggested by the following table.

SALES AND PROFITS OF ARAB AGRICULTURE, 1938-39 TO 1943-44

	Value of marketings at 1938-39 prices (£P)	*Value of marketings at actual prices (£P)*	*Profit realized after maintenance of 1938-39 standard of living* (£P)*
1938–39	1,400,000	1,400,000	
1941–42	1,414,000	4,485,000	1,657,000
1942–43	1,874,000	8,410,000	2,788,000
1943–44	1,786,000	10,107,000	3,000,000

Source: Unpublished study by Dr. L. Samuel. *Without allowance for interest and rent paid to non-farmers.

Jewish mixed farming also profited substantially from war demand. The standard accounting wage in Jewish mixed farming in 1938-39 was £P 0.275 per working day—and that wage was not always earned. The standard wage in 1943-44 was £P 1.100 per working day—and taking Jewish agriculture as a whole, that wage was earned with a profit. In 1943-44, consumption expenditures per family in all Jewish mixed farming averaged over £P 310. This meant a rise of about 35 percent in the real per capita standard of living as compared to 1938-39.

Jewish farms have also used their earnings to expand their equipment greatly—though the costs of wartime capital outlays were so high that it is difficult to measure the net capital expansion. The collective farms in particular have also expanded their equipment by borrowing money, but they have accumulated real assets for that money—and have pursued very conservative accounting practice in depreciating those assets. The balance sheets of the collective farms indicate clearly that they are increasing not only the absolute amount but also the percentage of their own equity in the total value of their farms. The indirect evidence of output suggests that the cooperative farms have done quite as well as the collective ones.

As indicated above, much of this more profitable position of

Jewish mixed farming is due to an increase of about two-thirds in real output. A part, however, is also due to favorable price developments. The share of both factors is indicated by the table below.

OUTPUT AND PROFITS OF JEWISH AGRICULTURE, 1938-39 TO 1943-44

	Value of output at 1938-39 prices (£P)	*Value of output at actual prices (£P)*	*Profit realized after actual current wage (£P)*
1938–39	1,089,000	1,089,000	
1941–42	1,510,000	4,230,000	1,030,000
1942–43	1,614,000	6,554,000	1,250,000
1943–44	1,814,000	8,400,000	970,000

Source: Unpublished study of Dr. Ludwig Samuel.

As the table indicates, the profitability of Jewish agriculture declined from 1942-43 to 1943-44. Even if the wage allowance per working day in 1943-44 had been put at £P 1.000 instead of £P 1.100, the money profits on the larger turnover of 1943-44 would have been merely equal to those on the smaller turnover of 1942-43. This situation reflects the "squeeze" to which Jewish mixed farming was subject due to having to buy its "raw materials" at rising prices. Arab agriculture was less subject to this "squeeze" because its chief resource input is labor.

Palestinian agriculture—taking Arabs and Jews, citrus and non-citrus, together—is no longer representatively a self-contained subsistence enterprise. The farmer buys seeds, fodders, transport, irrigation water and many other things. In Jewish mixed farming, in 1943-44 about 60 percent of total costs consisted of items other than labor. For the total Palestine agriculture, the deductions from gross output, which are the expenses—apart from human labor—made by the farm community to produce its share of the national income, amounted to about 30 percent in 1943. The significance of these deductions should not be pressed too hard, as measure of "commercial farming", because many of them represent exchanges within the farm community—and even within the various parts of the same farm. Moreover the share of non-labor input in Arab Fellah farming is probably only about one-fourth as high as in Jewish mixed farming. Nevertheless the detailed figures (in Table 9) suggest an agriculture that is moving away from self-sufficiency. These figures may be summarized as follows:

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* The rise is almost exactly the same percent as the increase in the total Arab population, but it was achieved with approximately constant Arab agricultural employment—the whole of the increase in the labor force having accrued to other occupations.

GROSS AND NET OUTPUT OF PALESTINIAN AGRICULTURE
(*Thousands of £P, at Current Prices*)

	1939	*1942*	*1943*
Crops	5,765	16,993	18,450
Livestock and products	2,665	6,838	8,650
GROSS OUTPUT	8,430	23,831	27,100
Expenses (excluding labor)	2,847	6,123	8,215
NET OUTPUT	5,583	17,708	18,885

Source: G. E. Wood, *Survey of National Income of Palestine*, Jerusalem, 1943, and unpublished memo. of Feb. 26, 1945. Prices assumed probably err on low side.

TABLE 9: GROSS AND NET OUTPUT IN PALESTINIAN AGRICULTURE
(*Thousands of £P, at Current Farm Prices*)

	1939	*1942*	*1943*
Cereals	1,500	6,338	5,000
Vegetables	700	3,860	5,000
Citrus fruits	2,155	486	450
Other fruits and olives	1,200	5,660	7,000
Fodder for dairy	115	449	700
Tobacco (net)	90	100	150
Vegetable seeds	5	100	150
Total gross crop output	5,765	16,993	18,450
Milk	1,450	2,865	3,500
Eggs	395	1,423	2,000
Honey (net)	80	150	200
Poultry	60	300	450
Meat (excl. slaughter of imported stock)	680	2,100	2,500
Total gross livestock output	2,665	6,838	8,650
GROSS FARM OUTPUT	8,430	23,831	27,100
Tools and machinery for dairying	11	3	5
Tools and machinery for other	55	25	35
Tractors (current costs)	75	115	150
Cereal and potato seeds	347	1,333	2,000
Vegetable seeds	29	167	200
Fertilizers	75	210	250
Import of farm animals	25	100	150
Transport and marketing, milk, eggs, meat	250	600	500
Transport, citrus	760	20	25
Grains and fodders for animals and poultry	770	2,900	4,000
Irrigation expenses, excluding farm labor	350	500	600
Rural property tax, less built-up areas	100	150	300
Total expenses	2,847	6,123	8,215
NET FARM OUTPUT	5,583	17,708	18,885

Source: G. E. Wood, *Survey of National Income of Palestine*, Jerusalem, 1944, and unpublished memo by G. E. Wood, Feb. 26, 1945. Figures on calendar year basis, not crop year. Probably underestimates prices at which output was actually sold in the war years.

PROGRESS AND PROSPECTS

In the past decade, Palestine has not been, by Western standards, a prosperous agricultural country. The methods and equipment of her Arab farmers could yield a standard of living only moderately higher than that common throughout the Middle East. Her Jewish farmers were too inexperienced, too ill-equipped, and too meagerly provided with urban markets to achieve prosperity. Only in citrus fruits did Palestine find a crop so ideally suited to her soil and climate that she could produce at prices competitive on world markets. For the rest, her farmers were limited, with very minor exceptions, to products for the farmer's own use or of a character (e.g., fresh milk, vegetables, eggs) such as to make proximity to urban markets a decisive advantage.

The following table gives the broad outline of the development of Palestinian food production and supply during the war period:

PALESTINE'S FOOD SUPPLY, PREWAR AND WAR
(All values at prewar prices)

	Crop year 1938-39		*Crop year 1943-44*	
	(£P)	*(%)*	*(£P)*	*(%)*
Arab output	4,010,000	47	4,670,000	50
Jewish output	1,089,000	12	1,812,000	20
Imports	3,500,000	41	2,800,000	30
Total supplies	8,599,000	100	9,282,000	100
Estimated population	1,461,000		1,713,000	
Supplies per capita	£P 5.9	100	£P 5.4	91

Sources: For Arab and Jewish output, a series of memoranda by Dr. Ludwig Samuel, to be published shortly. For imports, authors' own deflation of trade statistics. Imports are valued c.i.f., domestic supplies at farm prices. Domestic output is without citrus. All values approximate; each component of the 1943-44 total, in particular, may easily be in error by as much as 5 percent. Population end 1938 and 1943.

In 1936 Jews engaged primarily in agriculture had an average income of about £P 52 and Arabs an average income of about £P 24. The improved equipment and greater experience of Jewish agriculture have since brought about a decisive rise in productivity. At 1936-39 price levels for equipment, supplies, and products, Jewish farming can now earn about £P 90 to £P 100 per man-year (300 working days), provided that each person employed in agriculture has suitable land and farm equipment costing between £P 515 and £P 625. Arab agriculture has shown a more modest improvement. Should price relationships return to their 1936-39 pattern, the Arab farmer will have profited from the intervening years principally in having been freed from his heavy burden of debt. Only a revolution in the Arab economy, involving a major increase in irrigation, much more farm capital, more intensified farming methods, and the expansion of Palestinian urban markets, can guarantee a major sustained rise in the standard of living of the Arab farmer.

The backwardness of Arab agriculture is a millenial heritage surviving in spite of great progress during the past fifteen years. That progress is quite without parallel elsewhere in the Middle East. The following official indices afford a rough measure of the degree of improvement. Despite the fact that they relate to total crop production, their broad adequacy as indicators of Arab progress is guaranteed by the exclusion of citrus and by the fact that Jews accounted for only 21 percent of all other agricultural production in 1938-39 and only 28 percent even in 1943-44.*

TOTAL CROP PRODUCTION IN PALESTINE

	1926-30	*1932-35*	*1936-39*	*1940-43*
Index of cereals, legumes, and oil crops	100	75	103	120*
Index of vegetables	100	243	702	1,334
Index of fruits (excluding citrus, including olives)	100	163	374	428
GENERAL INDEX	100	98	174	224*

Sources: For 1926-42, *Statistical Abstract;* for 1943, figures supplied by the Palestine Government Office of Statistics.

*Understated, due to evasion of wartime controls.

During the past fifteen years, Arab agricultural enterprise has been increasingly concentrated in citrus, olives, other fruits, vegetables, dairy products and poultry, to the relative neglect of the traditional field crops in which Paletine has no comparative advantage. If further progress is to be attained, this trend must be accentuated.

Along with the progress of Arab agriculture has come a new Jewish agriculture without parallel in the Middle East and, in some respects, without parallel anywhere in the world. In Palestine an urban Western population has deliberately transformed itself into an agricultural peasantry, in the design of creating a healthy foundation for a Jewish National Home. It has practiced a religion of labor on the soil, not untinged with an obscurantist rejection of the market as an unhealthy factor in social and economic life. The distinguished American soil conservationist, Dr. W. C. Lowdermilk, has expressed great admiration for the achievements of this Jewish agriculture: "In the midst of general decadence in the Near East, there is hope in Palestine; hope made real by the Jewish colonies which are showing the most remarkable devotion to reclamation of land that I have seen in any country of the New or Old World. The result of their efforts thus far is an inspiration and splendid achievement. Unknown to themselves, these colonies have laid the foundation for a Greater Palestine and have shown the way for the resurrection of the Near East as a whole."

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* Moreover Jewish production (apart from citrus) consisted over 60 percent of dairy, poultry, and fish products which are excluded from these indices, not being "crops".

In 1945 the resurrection was still far off.

CHAPTER 15

MANUFACTURES TODAY

CHARACTER OF DEVELOPMENT

In contrast to her agriculture, Palestine's manufacturing has been dominated by Jewish-owned enterprises. Arab manufacturing, like Arab agriculture, remains—with few exceptions—low in productivity and bound by tradition.

At the end of World War I, Palestine had no modern manufacturing. It is estimated that in 1921-22 her handicrafts, workshops, and factories may have employed about 10,000 persons, of whom more than one-third were self-employed or unpaid family workers. By 1930 the number of gainfully employed in manufactures had increased to slightly over 15,000. In 1939 it was about 48,000, and in 1942 about 64,000. A measure of relative growth is provided by the fact that total manufacturing employment increased nearly five times between 1921 and 1939, while population increased slightly more than two times.

Today perhaps five-sixths of the gainfully-occupied in manufactures work in Jewish enterprises, and these enterprises account for a somewhat larger fraction of the total net value of manufacturing output. Clearly the development of Palestine's manufactures has been primarily a Jewish activity.

Palestine's basic economic position bears little resemblance to that of most countries that have been successful in the establishment of modern industry. She lacks the resources to attempt an "all-round" industrialization on the Soviet model. She does not have the large internal markets that were available to consume the output of large-scale manufacturing in Great Britain, the United States, Germany, and Japan, when those countries began industrialization. She also lacks the advantages which Switzerland, Belgium, and the Netherlands had in their nineteenth century industrialization—namely, old traditions of craftsmanship and ready access, with low transportation costs and moderate tariffs, to the markets of progressive neighboring countries.

Another factor often important in facilitating the beginning of industrialization—most apparent in the case of industrial latecomers, such as Japan and India—has been low labor costs made possible by low real wages. But Jewish Palestine, having a transplanted European population with Western standards of living, could not achieve low labor costs by paying her industrial workers the wages of Japan, India, or Brazil.

Palestine's atypical industrial development may be indicated in still another way. To make industrialization possible, usually either under-employed labor in agricultural areas must be transported to areas of capital surplus (as in the south and east European migration to the United States at the turn of the century) or capital must be transported to labor (as in the southeastern region of the United States in recent decades). Palestine's manufacturing progress, however, required the simultaneous importation of both capital and labor. Such simultaneous movements of capital and labor are familiar to Western society in the extractive industries exploiting natural resources, as witness the "gold rush" or the "oil strike"; but its occurrence is extremely rare in the development of manufactures.

Outside of Palestine, the simultaneous importation of skills and capital has taken place only on a very limited scale—and only in a few industries—in the Middle East. The Zionist movement has made the difference in Palestine.

JEWISH-OWNED MANUFACTURES

These conditions suggest some of the salient characteristics of Palestine's manufacturing industry. The rate of development of manufactures bears a high direct correlation with the rate of growth of the Jewish population, at least prior to World War II. Typically Palestinian manufacturing enterprises are engaged in producing consumers' goods that can be processed at the market and on a small scale.

The magnitude of the development of Jewish-owned manufactures is overstated (by U.S. definitions) in the Jewish Agency's censuses, due to the inclusion of electric power production and many services (garages, cobblers, laundries, etc.) in manufacturing. Caution must therefore be exercised in inter-country comparisons. However, the figures give a valid picture of the trend within Palestine.

Over the two decades, employment in Jewish manufacturing has increased more than nine-fold, capital invested has increased about twenty-five-fold, and the value of output (at inflated war prices) has increased seventy-six fold. Yet prior to World War II not much more than the beginnings of a manufacturing industry had been established in Palestine. A detailed examination of the last peacetime census (1937) taken by the Jewish Agency makes this abundantly clear.

DEVELOPMENT OF JEWISH INDUSTRY, INCLUDING HANDICRAFTS, 1921-42

	1921-22	*1930*	*1937*	*1939*	*1943*
Establishments	1,850	2,475	5,602	*	6,116
Gainfully occupied	4,750	10,968	28,616	36,000	52,000
Value of annual output (000 £P)	500	2,385	8,526	10,000	38,000
Capital (000 £P)	600	1,029	7,936	10,000	16,000
Horsepower	800	6,125	33,645	*	*
Index of gainfully occupied	100	231	602	758	1,095
Index of Jewish population	100	197	489	562	610

Sources: *Census of Jewish Manufactures,* 1937, p. XI; *Bulletin of the Economic Research Institute of the Jewish Agency,* 1942, vol. VI, p. 68; and the *Seventh Census of Jewish Manufactures,* 1943. All figures except those for 1930 were adjusted to exclude electricity production. Services in basic series were not excluded in any year because it was not possible to exclude them in the earlier ones. The 1943 magnitudes for handicrafts are based on the authors own estimates. Asterisk means that data are not available.

Most revealing of the character of Jewish-owned manufactures is the classification by type of product.

CHARACTER OF JEWISH-OWNED MANUFACTURING, 1937

	Percent of total resources	
Categories	*Capital*	*Personnel*
Single-use consumers goods	32.1	19.0
Durable-use consumers goods	38.2	56.3
Single-use producers goods	16.6	8.8
Durable-use producers goods	13.1	15.9
All goods	100.0	100.0

Source: *Census of Jewish Manufactures,* 1937, Dept. of Statistics of the Jewish Agency.

As indicated above, 70 to 75 percent of all manufacturing resources were devoted to the production of consumers' goods. These consumers goods were not produced for export but were designed primarily to meet the needs of the local market. Industries dependent on cheaper or specially skilled labor were precluded by the policy opposing employment of Arab labor, by the restricted employment of women (female labor accounted for only 20 percent of total manufacturing employment compared with 25 percent in the United States), and by the absence of readily applicable skills among the mass of the Jewish labor force.

Orientation of manufacturing toward raw materials also failed to account for any substantial fraction of total production since, generally speaking, domestic raw materials were conspicuously absent. A limited number of industries, however, were oriented to Palestinian raw materials, some of the obvious instances being processing of potash and bromine, the production of olive oil and olive-oil soaps, and wine-making. With these exceptions, the Jewish-owned manufactures of Palestine, in 1937, corresponded very well with the sage account of the manufactures of backward nations given by Adam Smith (*Wealth of Nations,* Bk. III, Ch. III):

> No large country . . . ever did or could subsist without some sort of manufactures . . . ; and when it is said of any such country that it has no manufactures, it must always be understood of the finer and more improved, or of such as are fit for distant sale. In every large country, both the clothing and household furniture of the far greater part of the people, are the produce of their own industry. This is even more universally the case in those poor countries which are commonly said to have no manufactures, than in those rich ones that are said to abound in them.

Since so much of Jewish manufacturing was market-oriented, and since so large a portion of the total Jewish population (63 percent in 1938) lived in the three cities of Tel Aviv, Jerusalem and Haifa, it followed naturally that a large fraction of Jewish industry was located in these cities. In fact they accounted for 75 percent of all manufacturing personnel, Tel Aviv itself accounting for 43 percent. The attractions of Tel Aviv to Jews, as an all Jewish city, have given it the lead over Haifa in manufacturing development despite Haifa's natural advantages as a port, as the gateway of Esdraelon Valley and as the terminus of the Iraq petroleum pipe line.

Excluding the service industries, the Jewish Agency census enumerated 4,548 establishments in the summer of 1937, with a total gainful employment of 26,298. Only 16 factories in the whole country employed 100 or more persons, and only 33 more employed beteween 50 and 100. (These 49 establishments employed nearly a quarter of all personnel.) About 89 percent of all establishments were handicraft shops, employing together with owners 1-4 persons and using little or no power machinery. Neither mechanization nor division of labor was far advanced. The average establishment (excluding handicrafts) employed 13 persons; in the United States, in the same year, the average was 51. Palestine had an average of 20.6 installed horsepower of prime-movers per factory establishment; the United States had an average of 115.3 horsepower. Installed horsepower per person gainfully occupied in manufactures was less than 1.6 in Palestine, compared to 2.3 in the United States. Persons in Palestinian industry worked with an average of about $1,330 of invested capital (apart from the value of land and buildings), compared with about $1,900 in the United States.

Equally indicative of the scale of Jewish manufactures is the type of ownership. More than 75 percent of all establishments were owned by individuals, a form of organization which usually commands the least resources. This reflects the limited capital available, the restricted market, and perhaps the typically individualistic temperament of the Palestinian Jew. The company or corporation, designed by its structure to combine the capital of many individuals, on the other hand, accounted for less than 3 percent of all enterprises—although these enterprises utilized about one-half of all capital invested in manufactures and employed one-quarter of the personnel. The corporate form was of leading importance in food processing, textiles, chemicals, and stone and cement industries. Intermediate to these two types were partnerships and producers' co-operatives, representing 19 and 3 percent, respectively, of all establishments.

Some idea of the more important individual branches of manufactures that had been developed by 1937 is provided by the following list:

JEWISH-OWNED INDUSTRIES WITH PERSONNEL OF 250 OR MORE, 1937

Industry	*Number of personnel on Census Day, 1937*
Bread made in factories	1,606
Chocolates and confections	469
Cigarettes and tobacco	265
Cotton and silk knitted underwear	499
Clothing, general	292
Clothing, men's	777
Clothing, women's	379
Tailors	360
Dressmakers	255
Doors and window frames, metal	490
Locksmithing	261
Construction of machinery	476
Furniture	759
Building framework and furniture, factories	801
Building framework and furniture, handicrafts	420
Shoe factories	546
Shoemaking, handicrafts	545
Printing, book and periodical	387
Printing, advertising materials	508
Publishing, book and periodical	634
Paper and cardboard products	362
Potash and bromine	930
Chemical; edible oil, soap, etc.	477
Hewn and crushed stone	573
Crushed stone for building	294
Cement	491
Pipes and tiles, concrete	282
Concrete products	548
TOTAL	14,140

Source: Census, *op. cit.*, adapted from Table I.

Only the 28 branches of manufactures listed above, out of 206 distinguished by the census, employed 250 or more persons. These 28 branches accounted for more than half of all persons engaged in manufactures. An even more important commentary on the character of prewar manufactures is the prominence of the construction and building materials industries in the manufactures total. Even in a year of only moderate building activity, 11 of the 28 important industries were concerned with the production of building and construction materials; these accounted for 36 percent of the employment. This is further evidence of the dependence of Palestine's manufacturing on local market opportunities.

The emphasis placed above on the position of Jewish industry in 1937 is due to the abundance of information provided by the census of that year and should not be taken to imply absence of progress after 1937. It is true that the political uncertainties following the disturbances of 1936-37 and the subsequent partition proposals engendered a similar feeling of uncertainty in the economic sphere. The more stringent restriction of immigration after 1936 had immediate repercussions in the building trades and in the manufacture of building materials. Reduced immigration also meant reduced capital imports. Moreover those who possessed investment funds were less bold than they had been in the 1933-36 high tide of immigration and capital inflow. Limited intercourse between Arabs and Jews tended to reduce the size of markets and to dislocate sources of supplies. Government, on the verge of formally giving up the bold expansionist policy enunciated in the Balfour Declaration, was less inclined than ever to undertake any large-scale public works of its own.

There were, however, offsets to these unsettling conditions. Newly arrived businessmen and technicians (from Germany, Austria, Czechoslovakia, etc.) were just getting started. Through transfer arrangements with German and Polish authorities, much machinery and large stocks of semi-processed materials were made available to Palestinians at greatly reduced prices. Commercial connections with Austria and Czechoslovakia were broken by German annexation, and importers turned to local suppliers. The Palestine Products Committee and the Foreign Trade Institute pushed the broadening of home and foreign markets.

The outcome was a further increase of 26 percent between 1937 and 1939 in the personnel engaged in Jewish manufactures. (The increase was from about 28,600 to 36,000, using the Jewish Agency's broad definition of industry.) The largest gains, both absolutely and relatively, were made in food processing and chemicals. Other large relative gains were in electrical appliances (146 percent) and textiles (35 percent). A considerable widening took place in the range of products. Thus the textile industry was enlarged by a dyeing and finishing mill, a mill for print-cloth and a wool-washing plant. The chemical industry moved into pharmaceuticals, glue, enamel, paints and varnish. New factories were established for the manufacture of electric wire.

The metal industry developed production of bathtubs, household hardware, aluminum ware, fire-fighting appliances, scales, and medical and dental instruments. Four diamond polishing companies were established. At the outbreak of World War II, Jewish manufactures in Palestine may therefore be fairly described as modest but progressive and expanding.

The modesty of the development can be underscored by reference to the volume of manufactures both imported and exported. The value of imported manufactures excluding semi-processed metals and wood used for further processing in Palestine amounted to about £P 9 millions in 1937 and £P 8 millions in 1939. These should be compared with a value of output in Jewish-owned manufactures of £P 8.5 and £P 10 millions, respectively. On the other hand, exports of manufactures, excluding potash and bromine, did not equal £P 350,000 in either of these two years. It is manifest that Palestine's manufacturing had not come of age prior to World War II although it had emerged from its childhood.

PEACETIME PROBLEMS OF MANUFACTURING

Published business records and public discussions of Palestinian manufacturing, in the years before World War II, reveal three major groups of problems: capital shortage, "excessive" competition, and labor conditions. Foremost was capital shortage.

New enterprises in Palestine have required higher investment per unit of product than similar enterprises in older industrialized countries. One reason for this high initial capital requirement has been absence of factory space that could be rented; many enterprises were obliged therefore to sink their capital into land and buildings. In addition, many industrial raw materials had to be brought long distances, and to ensure a steady, cheap supply it was necessary to purchase in large quantities; accordingly a large part of manufacturers' capital was tied up in carrying inventories of raw materials. Further, Palestine has not yet developed adequate wholesaling; therefore manufacturers had to use up their capital in warehousing their own products and in financing retailers. Had Palestine been a rich country, with abundant savings, all of these functions would no doubt have provided profitable opportunities for financing by specialized groups of bankers and businessmen. But Palestine has not had such private resources.

As always when long-term capital is scarce, many firms used short-term loans to finance fixed investments. An unpublished study of 94 companies shows how extensively Palestinian manufacturers resorted to this dangerous practice:

USE OF SHORT-TERM LOANS FOR FIXED INVESTMENT, 1936-37

Number of firms	*Percentage of short-term loans used for fixed investment*
13	0 to 25 percent
21	26 to 50 percent
33	51 to 75 percent
27	76 to 100 percent

Source: H. Cohen, *Report on the Industrial Credit Investigation,* May 1936-Jan. 1937 (unpublished).

About two-thirds of the manufacturers used half or more of their short-term loans for long-term commitments, and 57 percent of total short-term credits were employed to finance frozen assets. These loans were at interest rates as high as 8 percent. It is little wonder that successive bankruptcies often lined the road to profitable operations.

In the absence of any Government assistance, Jewish quasi-public institutions attempted to do something to meet the capital shortage problem. The Jewish National Fund and the Palestine Economic Corporation cooperated in buying a tract of land in Haifa on which they erected buildings to supply factory space for small manufacturers. Similar enterprises were established near Petach Tikvah, Rishon le Zion, and Tel Aviv. The Jewish Agency joined (1938) with the Anglo-Palestine Bank and the Industrial Bank Ltd. in creating a Fund for Industrial Consolidation and Promotion, making loans repayable in 10 years at 5 percent.

These steps were universally acclaimed as being in the right direction, but the resources involved were pitifully inadequate to the magnitude of the problem. Particularly after the MacDonald White Paper of May 1939, the industrial capital outlook was black. The capital belonging to individual immigrants had been responsible for four-fifths of the new investment in manufacturing under the Mandate. If immigration were to stop, so would the capital inflow. Moreover, the prospect of a relatively static economy in Palestine would lead many individuals to send their capital abroad. Jewish manufacturers felt that, through its immigration policy, the Government had aggravated an already difficult situation. They complained that, while in neighboring Turkey, Egypt and Iran—not to mention more distant lands—Government attempted to take the lead in facilitating and financing industry, in Palestine the official policy was one of turning a deaf ear to any industrial expansion which might enhance the absorptive capacity of the country. This passive Government role in industrial expansion had, of course, the virtue of being consistent with the Government's restrictive immigration program.

The second major problem of the peace years, from the point of view of Palestinian manufacturers, was "excessive" competition having its primary origin in the "free trade" policy of the Government and deriving in a lesser degree from the uncontrolled investment of Palestinians. Article 18 of the Mandate prohibited "discrimination of Palestine against goods originating in or destined for any State Member of the League of Nations." The Government interpreted part of this article liberally (so as to prohibit restrictions against Japanese goods even after Japan left the League) and part of it strictly (so as to prohibit general measures against dumping and general discrimination against countries which discriminated against Palestine).

In the early years of the Mandate, tariffs were levied on imported raw materials as well as on finished products. While this practice clearly impaired the competitive position of Palestinian manufactures, long struggles took place until the more important raw materials were exempted from tariffs. By 1939, however, this process had been completed so far as strictly raw materials were concerned. Manufacturers had much less success in securing exemption from customs duties of semi-processed goods that often constituted their primary materials. So far as manufactured items were concerned, the Government deviated from its non-protectionist policy only in a relatively few commodities, mainly processed foods and textiles.

It is difficult to evaluate the benefits and losses of this non-protectionist policy. It certainly provided a difficult test for Palestinian manufactures; the industries that survived intensive foreign competition may be considered to be well-grounded in the Palestinian economy. Moreover, in the shortrun at least, Palestinians as consumers have benefited by the importation of cheap manufactures. On the other hand, the total number of Jews absorbed in the shortrun in Palestine was reduced below what the number could probably have been under protective tariffs. Since the Arab population consumes only relatively small amounts of imported manufactures, it may perhaps be argued that it is for Palestinian Jewry to decide whether it is willing to make a sacrifice in its standard of living for the sake of bringing a larger number of

Jews into Palestine. Whether this sacrifice were permanent would depend upon the discernment exercised in choosing "infant industries" for protection. If the industries chosen for temporary protestion matured into enterprises surviving without tariff protection, there would of course be no permanent impairment of living standards.

Palestinian manufacturers were also anxious to control the play of market forces in other ways. In fact they were seriously infected with the restrictionist philosophy of trade associations and cartels. The peculiar circumstances surrounding the transfer of immigrants' wealth had much to do with this seeming paradox of capital dearth and capital surplus. Since, beginning with the middle thirties, the transfer of wealth from Germany, and later from Poland, Lithuania, Czechoslovakia and Austria, had to be effected in the form of goods, much of the wealth lost its fluidity. The transferred commodities often arrived in the form of machinery and other capital equipment, which was drafted into industry and soon increased local production capacity beyond the needs of the local market. This situation, by furnishing examples of overcrowded industries, discouraged further imports of liquid capital. To counteract the effects of "excess competition," a variety of projects for regulating output and new investment were enunciated by manufacturers, all designed to ensure the profits of the firms already in existence in the "base period"—even at the expense of static total output and in denial of the Zionist ideal of an expanding economy for many more hundreds of thousands of Jews in Palestine.

Labor relations, in the conventional sense, were not a major problem of Palestinian industry in the prewar years, in spite of the fact that Jewish Palestine had the highest percentage of organized workers in the world. Strikes were not unknown, particularly in Jewish industry, but they were generally compromised without long shutdowns. In the more serious disputes the Labor Department of the Jewish Agency often intervened to effect a settlement through mediation. In spite of the universality of trade union organization in Jewish industry, wage rates remained moderately flexible, with a generally declining trend from 1935 to 1939. The greatest declines occurred in the industries supplying the depressed building trades.

A greater cause of concern to manufacturers than the usual problems of labor relations was competition from labor's manufacturing enterprises. The development of these labor enterprises was partly the result of general ideological considerations and partly the outcome of an effort on the part of labor to stabilize employment. Also, in the agricultural cooperative settlements, these industrial enterprises were an effort to achieve fuller use of labor throughout the year as well as to provide a stabilizing income offset to unpredictable crop fluctuations. The workshops in the communal settlements had an output in 1939 valued at £P 221,000, but only £P 59,000 (1939-40) was sold to the general public. Producers' cooperatives engaged in manufactures created a product, in the same year, valued at £P 243,000. Prior to the war, Solel Boneh (now the greatest labor enterprise) had not acquired any factories and those operated by the Hashomer Hatzair (a left-wing union of collectives and a political party) in partnership with private capitalists had scarcely begun production. Thus of the total gross value of manufactures of £P 10 million about £P 300,000, or 3 percent, originated in labor enterprises. Even a development of this limited magnitude was sufficient to cause some apprehension among other manufacturers, who were concerned lest labor enterprises become a major structural feature of the Palestinian economy in industry as labor enterprises had become already in cooperative and collective farming.

ARAB-OWNED MANUFACTURES

Today, as a quarter century ago, most Arab manufacturing establishments would fall below the threshold of the U. S. Census of Manufactures (with its disregard of establishments whose annual value of output is under $5,000). They are small handicraft shops, without power-driven machinery, that produce for extremely local markets. The only important producers' goods manufactured by Arab-owned establishments are irrigation pumps (but not engines), milling machinery, and building materials. Their only substantial (but declining) export is olive-oil soap; being free of animal fats, it meets the ritual requirements of Moslems in neighboring countries. Flour-milling is their one really modern industry. They have also, however, under British guidance, adopted machine processes of cigarette-making and have profited from the demand for building materials arising from the increase of population. This is reflected in the expansion of quarrying and dressing of stones and in the manufacture of bricks, pipes and tiles.

It is probable that establishments too small to be enumerated in 1939 were as much as four or five times as numerous as those counted. On the other hand, the unenumerated establishments probably have an average employment of less than two persons. It is estimated that total employment in Arab manufactures, in 1939, was over 6,000. This industry produced primarily consumers goods of low quality for a local market, and it employed cheap unskilled labor.

A government census of manufactures as of 1939, covering only the larger Arab-owned establishments, enumerated 350 enterprises distributed as follows:

ARAB-OWNED MANUFACTURES, 1939 AND 1942

	1939			1942		
Industry groups	*Number of establishments*	*Number of persons engaged*	*Value added*	*Number of establishments*	*Number of persons engaged*	*Percent change in persons engaged 1939 to 1942*
TOTAL	350	3,728	280,199	1,203	7,278	95
Food, beverage, and tobacco	120	1,349	131,129	159	2,079	54
Chemicals	31	387	49,802	20	407	5
Wood products	42	303	14,196	277	643	112
Paper and printing	7	173	12,514	6	207	20
Leather products	11	65	4,560	13	57	−12
Textile products	65	663	16,312	204	1,750	164
Wearing apparel including shoes	30	230	14,540	315	1,278	456
Stone and glass	16	151	5,906	17	53	−65
Metal products and machinery	46	403	31,240	192	804	100

Source: Censuses of Industry, 1939 and 1942 (provisional), Dept. of Statistics, Government of Palestine (unpublished).

The impact of World War II has brought expansion, but it has not basically altered the character of Arab industry. Its wartime expansion has been concentrated in textiles and shoes. Including handicrafts, Arab manufactures probably engaged 10,000 to 11,000 persons at the end of 1942. This number is about one-fifth of the Jewish total.

WARTIME EXPANSION IN JEWISH-OWNED ENTERPRISES

Jewish-owned manufactures made much greater progress during World War II. Their peacetime competitive problem was largely removed. A very high "natural" protective tariff in effect resulted from the combination of Axis domination of countries formerly exporting to Palestine and the scarcity of shipping space. Demand was further enlarged by military orders. Profits were substantial enough to free manufacturers from their previous dependence on short-term loans for long-term operations and to permit a considerable accumulation of reserves.

The first impact of the war upon Palestine was one of unmitigated dislocation. Europe had supplied 45 percent of her imports, including a large fraction of her metal and textile materials and more than half of her industrial machinery and tools. The shipping shortage practically eliminated citrus exports, which had formerly accounted for 75 percent of Palestine's total exports; 15,000 to 20,000 citrus workers (both Arabs and Jews) became unemployed, and manufacturers producing supplies for the citrus trade were particularly hard hit. Total military expenditures of about £P 5,500,000 in 1940 (including pay of troops) were insufficient to offset these depressing factors. The average number of Jewish workers registered as unemployed for three or more continuous weeks in 1940 was 9,982—some 53 percent more than in August 1939.

Only in 1941 did military orders emerge of a magnitude to compensate for other depressing factors. Orders placed with Palestinian manufacturers were only about £P 1.1 million in 1940 but they rose to about £P 3.5 in 1941, about £P 8.1 in 1942 and about £P 12 million in 1943. These magnitudes must be compared with the £P 10 million total value of Jewish manufacturing output in 1939.

The shortages of raw materials and equipment in the face of the greatly expanded demand of the military and civilians for locally produced goods necessitated systematic governmental controls (both local and regional) over imports, exports, foreign exchange transactions, allocation of materials and equipment, and thus control over the organization of new enterprises. The necessity of these types of control cannot be questioned, but neither can one doubt their retarding effect on expansion. The war record of manufactures must be read in the context of these thoroughgoing controls.

Some indication of the magnitude and character of the wartime development is provided by the Jewish Agency census of manufactures, excluding handicraft shops, for 1942-43 in comparison with its previous census of 1937, adjusted for the exclusion of the handicraft shops. These comparisons are made in Table 10. While total personnel more than doubled, value added by manufacture (reflecting inflationary prices) increased by nearly 400 percent. The increase in personnel comes much closer than the increase in value to measuring the magnitude of the gain in real output. In terms of personnel, more than average expansion occurred in electrical products, machinery, textiles, metal products and chemicals. Especially noteworthy is the rapid advance in the cutting and polishing of diamonds. Contraction took place in the building materials industries with the cessation of private building and in the paper and printing industry due to the shortage of materials. The indexes of the Jewish Agency indicate that the general employment peak was reached in 1943, with the average for 1944 only about 5 percent below the peak.

This expansion of output was not accompanied by an extraordinary volume of investment in new plant and equipment. According to census materials 568 plants were established between 1937 and 1942. Manufactures continued to concentrate to an even greater degree in Tel Aviv and vicinity, accounting for 60 percent of all personnel in 1942 compared with 52 percent in 1937. The aforementioned preference for an all Jewish city apparently remained an important determinate. The Jewish Agency estimated that, in the three years 1940-42, about £P 3.0 million were invested in 477 new establishments and in the expansion of existing enterprises. This is about the same rate as prevailed in the prewar years. Output was expanded primarily by the fuller utilization of prewar capacity.

Technicians previously employed at less than their highest skill were also very important in making possible the war expansion. A great many of these were included among the 1,400 persons listed with the Technological Bureau of the Jewish Agency. Other important technical assistance was provided by the Scientific Advisory Committee (under the chairmanship of the President of the Hebrew University), the Laboratory for Testing Materials, the Daniel Sieff Institute, and the Hebrew Technical Institute. Without these talents, it would have been impossible to achieve so great an expansion and so diversified a range of new products.

Liquid capital funds for war expansion were provided only in small measure by the commercial banking system. Before profits produced universal liquidity, an important role was played by a special Consortium formed by the Jewish Agency, the Anglo-Palestine Bank, and the Industrial Bank. So far as public information indicates, only one plant—for the manufacture of chlorine, caustic soda, and potassium chlorate—was financed by the Palestine Government (£P 130,000).

Changes in the structure of industry were striking. In 1937 only 16 Jewish-owned firms employed more than 100 persons, and these firms accounted for about 16 percent of total employment. In 1942 there were 50 such enterprises, accounting for 30 percent of total employment. In non-Jewish industry—in this instance British capital and management—the most important new establishment was an oil refinery at the terminus of the pipeline in Haifa. Along with the expansion in scale of operations has come a more extended utilization of machinery. The evidence for this, however, is indirect: a 70 percent increase in the value of pur-

Table 10: **NUMBER OF ESTABLISHMENTS, NUMBER OF PERSONNEL, AND VALUE ADDED IN JEWISH-OWNED MANUFACTURES (EXCLUDING HANDICRAFTS), BY INDUSTRY GROUPS, 1937 AND 1942**

Industrial groups	*1942*			*1937*			*Percent change in personnel 1937 to 1942*	*Percent change in value added 1937 to 1942*
	Number of establishments	*Number of personnel*	*Value added (in 000)*	*Number of establishments*	*Number of personnel*	*Value added (in 000)*		
TOTAL	2,120	45,049	17,623.8	1,552	20,594	3,619.3	118.7	386.9
Food	383	7,377	3,528.2	290	3,676	814.4	100.7	333.2
Textiles	247	5,632	1,972.8	86	1,508	174.6	273.5	1,029.6
Clothing	184	2,802	823.5	124	1,264	139.5	121.7	490.2
Metal works	191	5,716	1,807.3	178	1,957	363.7	192.1	396.9
Machinery	208	4,058	1,233.0	88	915	133.5	343.5	823.8
Woodwork	180	1,644	652.4	246	2,084	368.4	−21.1	77.1
Leather	124	1,806	715.4	61	842	136.9	114.5	422.5
Printing and paper products	193	2,226	809.4	157	2,282	350.9	−2.5	130.6
Chemicals	180	4,795	2,564.3	71	2,002	396.4	139.5	546.9
Stone and cement	72	1,966	947.7	156	3,058	592.4	−35.7	59.9
Diamonds	32	3,571	1,140.0					
Electrical appliances	54	2,146	956.4	38	332	47.2	546.4	1,926.7
Miscellaneous	72	1,310	473.4	57	674	101.3	94.4	367.2

Source: Censuses of Industry by the Statistical Department of the Jewish Agency for the Department of Industry and Trade of the Jewish Agency.

chased fuel and power per establishment between 1937 and 1942. While some of this increase reflects the rise in price of fuel oil, it is nonetheless a very real and substantial gain since rates for electric power (which constitutes much the most important source of power to manufactures) were no higher in 1942 than they were in 1937.

A large number of commodities were produced for the first time, many for the military authorities and some for civilian consumption. Even among the commodities produced for the military, however, very few were distinctively war goods. Of items produced by private plants, only anti-tank mines and shrapnel balls would qualify as ordnance. Perhaps the most remarkable among the "heavy" products, produced for the military, were steel castings. Other heavy new items included hydrofluoric acid, electric cable, containers, mess tins, sprayers, etc. "Light" items included fewer new products, except among pharmaceuticals and plastics. Wholly civilian type items supplied to the military included jams, beer, citrus juices, etc., as well as clothing and leather products.

The gaps in available indirect military and civilian supplies, due to the fall in imports, presented as great a challenge to Palestinian industry as did its direct military orders. The entire task of improvising new machinery and adapting existing machinery to new products was performed by domestic machinery shops. The diamond cutting and polishing industry, for example, was equipped with machinery and tools exclusively by Palestinian manufacturers. Lathes, drills, looms and agricultural machinery were produced in the country for the first time. So also were glass containers, optical and scientific instruments, retreaded tires, spare parts for motor vehicles, pharmaceuticals from castor oil to sulfa derivatives, superphosphate fertilizers, and a wide variety of other products.

Most spectacular was the rise of the diamond industry. From 200 in September 1940, its personnel increased to 3,500 in the summer of 1943. From £P 25,000 in 1940, the value of its exports rose to £P 3,300,000 in 1944. About 70 percent of total production in the latter year was exported to the United States. In the spring of 1943, net profits were estimated to be about 40 percent of sales.

Further insight into the changed character of Palestinian manufactures may be derived from an examination of the manufactured products (apart from petroleum and its products, potash, bromine and diamonds) that accounted for at least £P 70,000 of exports in either 1937 or 1944.

Only 3 processed commodity groups topped the £P 70,000 mark in 1937. They were all concerned with oils and soaps, and two are largely Arab industries. Two of these three products had exports of less than £P 70,000 in 1944. Fifteen other branches of manufactures crossed this line in 1944, and they represented a much wider range of commodities. The acute shortage of goods that prevailed throughout the Middle East made this result possible. Despite the temporary character of the enabling circumstances, some of the results are bound to have a long-term effect. Both management and workers were well rewarded while they acquired experience. It is more usual to sustain losses during an initial period of establishing new lines of products and training a labor force. Trading contacts have been established, and new customers have become accustomed to using Palestinian products. This greatly diversified list of commodities compared with prewar production suggests that Palestinian manufactures will have greatly reduced their dependency upon the building and construction industry even after postwar readjustments are made.

MAJOR MANUFACTURED EXPORT PRODUCTS, 1937 AND 1944
(*Thousands of £P*)

Exports of increased value:	*1937*	*1944*
Fruit juices	9.9	146.2
Drugs and medicines	1.7	178.4
Toilet preparations	3.7	98.1
Essential oils, other, n.e.s.	8.5	89.2
Matches, boxes	0.0	73.9
Phosphatic mineral or chemical fertilizers	0.0	73.3
Tanned hides and sole leather	0.0	95.3
Asphalt	0.0	126.0
Pajamas, shirts, tricot underwear and knitted wear	30.5	264.4
Wearing apparel of wool		161.1
Wearing apparel, other	4.0	203.5
Footwear	0.7	209.6
Artificial teeth	34.4	96.9
Window glass and other plate glass	0.0	94.1
Industrial and manufacturing machinery	0.0	71.4
Exports of decreased value:		
Olive oil	99.6	28.1
Other oils	112.5	105.1
Other soaps and washing powders	74.3	57.9

Source: *Monthly Trade Bulletin,* May 1938, and Supplement to the *General Bulletin,* March 1945.

Another basic change was the greatly improved profitability of manufacturing operations. Net property income derived from manufacturing rose from £P 2,918,000 in 1939 to £P 6,984,000 in 1942 and probably to more than £P 8,000,000 in 1943 (according to our own estimate). In the latter years, property income from manufacturing (including rents and interest paid by manufacturers, partnership withdrawals and savings, and net income of corporations) was more than half as great as the total capital invested. Businesses accordingly accumulated substantial reserves in addition to generous allowances for depreciation.

The rise in the wage bill was equally precipitous. This is pointedly revealed by the comparison of the Jewish Agency indexes of man-days and the wage bill in all Jewish manufactures.

INDEXES OF EMPLOYMENT AND WAGES

(Monthly average 1939 = 100)

	Man-days	*Wage bill*	*Wages committee index of cost-of-living*
1939	100	100	100
1940	109	109	
1941	136	152	
1942	177	285	192
1943	213	552	233
1944	200 (provisional)	612 (provisional)	242

Source: Jewish Agency for Palestine, Dept. of Statistics, *Statistical Bulletin* (summary 1944), pp. 16-17, for indexes of man-days and wage bill; cost-of-living index from *General Bulletin*, Feb. 1945.

For manufacturers as a whole, between 1939-1943 there was a five-fold increase in wages paid for only double the labor input as measured in man-days. Measured in man-hours, labor input presumably would have shown a somewhat greater increase. The rise in money wages has reflected the labor scarcity, premium rates for overtime, the altered composition of industry requiring more skilled and better paid jobs, and, most important of all, a rapidly rising cost of living, which first became serious in 1941.

The government's major effort in the field of wage stabilization policy consisted in extension and regularization of the system of cost-of-living allowances formerly observed by the Manufacturers Association and the General Federation of Labor (Histadruth). After many strikes, and on the recommendation of a Government Wages Committee under the chairmanship of the Chief Justice, a general wage formula was adopted in April 1943. This formula provides that all wage earners be compensated for the full increase in the cose of living from August 1939, on the first £P 8.5 of earnings per month; on the next £P 2.0 of monthly earnings the cost-of-living allowance is 40 percent of the percentage increase in the cost of living. No adjustment is made on earning above £P 10.5 per month. The formula does not profess to compensate workers fully for the rise in the cost of living. The following has been the actual trend in cost-of-living allowances on the first £P 10.5 of monthly wages:

	1939	*1940*	*1941*	*1942*	*1943*
Percent allowed on first £P 10.5	3	12	29	60	120

Source: Dept. of Statistics, Jewish Agency, mimeographed, 1944.

By July 1944 cost-of-living allowances accounted for 47.2 percent of the total wage bill according to the special tabulation of Jewish-owned enterprises made by the Office of the Government Statistician. Thus a substantial deflation of money wages can be achieved by quasi-automatic means, through considerable reductions in the cost of living, unless new political considerations intervene.

It is in the scale of basic wages, however, that real structural wage changes have occurred. Prior to the Government's agreement on cost-of-living allowances, outright increases in basic wage rates were granted; after this agreement, they have usually taken the form of bonuses, premiums, overtime rates for regular time work, etc. The effect on basic wages of all these expedients is reflected in the following measures of changes in basic wages per man-day:

RISE OF BASIC WAGE RATES

	Basic wages per man-day (in mils)		*Percent increase 1944 over 1939*
	1939	*July 1944*	
All industries	328	475	45
Food and beverages	341	465	36
Textiles and wearing apparel	271	433	60
Metal products and machinery	316	481	52
Wood products	322	506	57
Leather products other than shoes	363	535	47
Printing and paper	257	401	56
Chemicals	385	527	37
Stone, cement and ceramics	414	602	45
Miscellaneous	266	348	31

Source: Figures for 1939 computed from man-days and wage bill data in the *Statistical Yearbook* of the Jewish Agency for 1943, pp. 4 and 5; the figures for July 1944 are based on a special tabulation of the Government's sample of Jewish-owned manufactures reporting monthly. The tabulation is comprised of those firms that reported both total wages, cost-of-living allowances, and man-days worked. The Government did not have a similar sample in 1939.

To interpret these changes, it is necessary to bear in mind that wage rates in the base year, 1939, were somewhat depressed below the level of the boom years 1935-36 and that the man-day in 1944 on the average involved more hours of work than the average man-day in 1939. Nonetheless the rise in basic wage rates was high in all industry groups. This poses a serious problem in readjustment especially since there is little evidence of a concomitant increase in labor efficiency.

There is somewhat more evidence that the wage differentials between Jews and Arabs have been moderately narrowed although the absolute difference continues to be wide. A rough measure of the magnitude of the relative reduction in the differentials is shown by the following:

RELATION OF ARAB AND JEWISH WAGES

Industry groups	*Wages of Jewish factory workers as a percent of wages of Arab factory workers* 1939	1944
All specified industry groups	281	250
Food	258	203
Beverages	242	221
Tobacco products	230	207
Oils	336	222
Chemicals	257	212
Wood products	287	206
Paper and paper products	167	323
Wearing apparel	182	273
Non-metallic minerals	423	325

Source: Figures for 1939 based on average annual wages paid to factory workers as reported in the Government's Census of Industry (unpublished); figures for 1944 based on average earnings per man-day of daily paid workers (monthly Jan.-June 1944) reported in the *General Bulletin,* October 1944, p. 477. To derive an average for the total of all specified Jewish-owned industries, the individual industry averages were weighted by the number of wage workers as reported in the Government's Census of Industry 1942 (provisional and unpublished). Industry classifications, and therefore skills involved, are not strictly comparable.

Even by 1944, in no industry group was the wage rate of Jewish workers less than twice that of Arab workers and, on the average, it was about two and a half times higher. Nevertheless, in seven of the nine industry groups there was a significant narrowing of the differentials. It is doubtful, however, whether this reduction has been large enough or permanent enough to be regarded as a structural change.

There can be less doubt about the structural change represented by the wartime progress of the Histadruth manufacturing enterprises. Urban producers' cooperatives became of diminished importance, increasing their employment between 1939 and 1944 only by 10 percent. Expansion was mainly restricted to the cooperatives producing wearing apparel, more particularly shoes. On the other hand, producers' cooperatives operating in the collective settlements and producing for sale on the general market provided three times the volume of man-days of employment in 1943 that they provided in 1940. This tripling should be compared with the doubling of the man-days of employment in all Jewish-owned manufactures during the same years. The most important gains were made in the factories processing citrus products.

Of much greater significance, however, was the growth of non-cooperative enterprises operated by Histadruth institutions. The Solel Boneh, for example, enlarged its control over the supply of building materials by purchasing the Palestine Window Works

(Phoenicia), to date the only plate glass factory in the Middle East, and Vulcan Foundries, the largest foundry in the region, equipped to manufacture bathtubs and fittings. It has also purchased a controlling interest in Hawak, a silicate brick factory. More recently Solel Boneh has organized a ceramics plant to produce a variety of sanitary installations. Early in 1945 all of these companies engaged in the production of materials required for building were transferred to a newly organized firm, "Koor" Industries and Crafts Company Limited.

Solel Boneh, moreover, has not restricted its investments to suppliers of building contractors. Together with Nir Ltd., another Histadruth institution, Solel Boneh founded Hadrion Ltd., a firm producing citrus concentrates. In still another branch of manufactures, Solel Boneh acquired and greatly extended the activities of Hamgaper, formerly a producers' cooperative, engaged in retreading tires and producing rubber products from reclaimed rubber. All these companies participated in the wartime prosperity.

The enterprises of Hashomer Hatzair in partnership with private capital utilized the improved business position to place their three prewar factories on a sound and profitable basis rather than to found new enterprises. In this more limited objective they were successful by 1944.

The following summarizes the scope of Histadruth manufactures in 1944:

SCOPE OF HISTADRUTH (JEWISH LABOR) ENTERPRISES

	Number employed 1944
Total	3,413
Urban producers' cooperatives	790
Producers' cooperatives in collective settlements producing for sale on the market	425
Hashomer Hatzair in cooperation with private shareholders	275
Solel Boneh:	
Koor industries	563
Other enterprises	972
Other Histadruth factories [a]	388

Source: Bulletin of the Statistical Department of the Histadruth, January 1945. [a] Includes flour mill and wool factory operated by Hamashbir Hamerkazi, the dairies of Tnuva, Yachin oil products factory, bakeries of the Consumers Cooperatives, and printing presses.

With an estimated 53,500 engaged in Jewish-owned manufactures in 1944, the Histadruth factories would account for about 6 to 7 percent of the total. In 1939 such enterprises represented about 3 percent of all manufactures.

With the advent of victory in Europe, Palestinian manufactures had in large measure accomplished the shift from production for military orders to production for civilian demands without any appreciable loss in volume of employment. Palestine's very marked industrial expansion of the war years, however, has yet to meet the test of Western competition.

CHAPTER 16

HOUSING AND CONSTRUCTION

PRE-WAR CONDITIONS

The construction industry is an effective stimulant to a wide range of other economic activities since a large portion of its costs is paid out in direct wages and salaries and since most of the building materials and installations, because of their bulk, are typically produced locally. Although local production of building materials and installations has not been as dominant in Palestine as is common elsewhere, the construction industry has played a very important role in the Palestinian economy, more particularly in the economy of the Jewish community. This is an obvious consequence of a rapidly expanding population, with Western standards, settling amidst the stagnation of the Middle East.

The General Federation of Jewish Labor (Histadruth) early in the twenties realized the necessity of devoting very considerable resources to building and construction. It utilized this necessity to absorb the new immigrants into the economy by employing them in construction. To this end, it originated its own contract construction company, Solel Boneh, to train workers and promote public works as a form of work relief.

The record of the relative number of Jewish workmen employed indicates the community's extreme preoccupation with building and construction needs:

JEWISH EMPLOYMENT IN CONSTRUCTION

Year	*Jewish workmen employed on building*	*Percent of all Jewish workmen*
1925	7,800	43.0
1926–27	4,500	34.2
1932	3,000	10.9
1933	7,000	16.7
1935	16,500	19.4
1936	10–11,000	10–11

Source: "Building as a Factor in Jewish Economy in Palestine" by Fritz Naphtali in *Housing in Jewish Palestine*, Economic Research Institute of the Jewish Agency, Jerusalem, 1938, p. 145.

The comparable percentage in Britain in 1931 was 5.1, and in the United States the percentage varied from 4.2 in 1929 to 2.9 in 1935. The year-to-year level of employment in construction fluctuated with the general prosperity of the country, which in turn was largely conditioned by the volume of immigration. The decline in the percentages between the middle twenties and the middle thirties—the prewar peak in absolute terms—reflects the development of manufactures, agriculture and transportation as alternative avenues of economic absorption.

The national income data disclose much the same picture. In 1936, the only year for which we have comprehensive comparative data for Arabs and Jews, building and construction, excluding building materials, accounted for 9 percent of the total Jewish income, but only 3 percent of the non-Jewish total. In the United States, the analogous figures were 4.3 percent in 1929 and 2.2 percent in 1936.

The table below sets forth the value of building activity during the thirties. The boom in private building occurred from 1933 to 1935, reaching its peak in the year of largest immigration, 1935. Construction activity fell off in 1936 due to the disturbances and continued to decline thereafter until the outbreak of the war.

VALUE OF CONSTRUCTION ACTIVITY IN PALESTINE, 1930-39
(*Thousands of £P*)

			Public			
Year	*Total*	*Private*	*Total*	*Municipal*	*Government*	*Military*
1930	2,816	2,358	458	91	299	68
1931	3,020	2,625	395	96	215	84
1932	3,245	2,823	422	116	262	44
1933	5,948	5,482	466	110	313	43
1934	7,622	6,682	940	312	593	34
1935	9,288	8,155	1,133	274	808	51
1936	6,704	5,453	1,251	235	890	126
1937	5,021	3,863	1,158	257	784	117
1938	2,491*	1,625	866*	259	487	120*
1939	2,306*	1,297	1,009*	193	696	120*

Source: 1930-39 data from *Statistical Abstracts*. * Figures for military estimated.

Private building activity aggregated over £P 40 million from 1930 to 1939 inclusive. Over the same period, municipalities, government and military authorities spent about £P 8 million on buildings, roads, and water supply. Government projects employed primarily Arab workers. In the more recent prewar years, mandays worked by Jews on public works, both on force account and on contract, accounted for about 15 percent of the total mandays provided by public programs.

Inadequacy of Housing

In spite of the relatively large share of total economic activity devoted to construction in Palestine before the war, the volume of construction was inadequate to satisfy both private and public needs, except on a very meagre standard. The most serious deficiencies were in residential housing. These deficiencies manifested themselves in overcrowding and in the poor and antiquated housing of most of the Arabs and of the older Jewish sections. Even in the newer Jewish sections, lack of intelligent advance planning and zoning, the rapid development of new residential sections, the considerable overcrowding, and the poor construction of the buildings brought about the deterioration of housing in a very short time. Parts of Tel Aviv built only 20 to 25 years ago are now considered slums. The poor construction of the buildings was due in part to the fact that very few of the early Jewish construction workers were skilled in the industry as craftsmen or as professional architects and engineers.

The most serious aspect of the inadequacy of housing was the overcrowding. There was the temporary overcrowding that resulted when immigration and natural population growth expanded more rapidly than the volume of new housing; and there was the more permanent overcrowding which resulted from inadequate housing facilities due to limitations of income.

Overcrowded living conditions were found at all levels of income in Palestine. One seldom encounters there the luxury of several rooms for a small family, which is so characteristic of the middle class and even some of the lower income groups in the United States. The density of population in the cities is reminiscent of slum areas in the U. S., although (with the exception of the old Arab sections) facilities and living conditions are better than in the U. S. slums.

In 1937 the number of persons per room*, for the Jewish wage-earning group, was 2.3 in Haifa and 2.1 in Tel Aviv. These averages suggest a dispersion that probably means that about half of the workers were living three or more to a room. Among the lower income groups of Jerusalem (to which more than one-half of the Jewish population belonged) the overcrowding was even worse. The existence of such conditions prompted the Reconstruction Commissioner of Palestine to express the belief that the Jews in the cities are even more crowded than the Arabs.

The adjacent cities of Tel Aviv and Jaffa, nevertheless, present a sharp contrast in Arab and Jewish living. Tel Aviv, a relatively young city, has benefited from experience in modern architecture in other parts of the world. It is not easily distinguishable from a small modern city in America; its buildings are white and up-to-date in design, and its streets are wide. Jaffa, on the other hand, is an old community and lacks the advantages of modern architecture. Most of the housing in Jaffa, as in the old cities of Haifa and Jerusalem, is substandard by almost any Western criterion. The old buildings, narrow streets, dark rooms, bare furnishings, poor sanitation, and lack of modern conveniences all hark back to an earlier century. The shops are small, unattractive, and certainly ill-equipped to cater to Western tastes.

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* Rooms exclusive of kitchen, bath and toilet facilities.

Arab housing in the rural areas is not so congested as in the cities, but it is far below Western standards except for our poorest slum areas. There are no isolated farmhouses or sparsely settled suburbs. The rural Arabs live in densely built-up villages. They cluster for security against bedouin and robber. The houses are grouped in one and two-room units connected in a courtyard arrangement. They are usually one-floor structures with very little furniture and no modern conveniences. Generally, the streets can accommodate only foot traffic or travel by donkey and mule. In the southern part of the country many of the houses are built of mud bricks; in the north, around the Hula Basin, the natives rely on thatch and mud, while in the mountain villages and larger communities, most of the homes are built of stone block. These mountain villages blend picturesquely into the stony hills, enhancing the beauty of the Palestinian landscape.

Among the rural Jews, there is the same tendency to cluster for security. Even in the most individualized agricultural undertakings, the Jews live close together. In the private villages (Moshavot) and cooperative Jewish settlements (Moshavim) the residents live in small bungalows. In the collective settlements (Kibbutzim) the adults usually live in dormitories and the children live apart in what are usually the best-equipped, most modern, and most comfortable of all settlement buildings. In some of the newer and less developed Kibbutzim, more than one married couple, or married and single persons occasionally are crowded into one small room. The more prosperous Kibbutzim have been able to provide each married couple with a small private room. The Kibbutzim usually provide special rooms for dining, reading, meetings, recreation, and music. The degree of comfort varies with the prosperity of the community.

In general, the newer houses in both Arab and Jewish sections are multiple-unit structures and include small but attractive family units. The houses are usually built of cement or pink or pale yellow stone blocks, which are quarried locally. Their architecture is well adapted to the climate, especially the heat of the long summers. Window and door space is ample. The great reliance on stone, cement and tile keeps the buildings cool, but these same materials tend to retain dampness and cold in the winter. Very few homes have central heating; even in many of the more expensive buildings, it is necessary to rely on fireplaces and small oil burners for comfort in the winter months. The Jewish homes are furnished in the Western style with modern conveniences and comfort varying with income. Among the lower-income groups, the facilities, though modern, are few in number, reflecting the great economy exercised in construction of the buildings.

Public Buildings

Schools, hospitals, and Government buildings, on the other hand, are still hopelessly inadequate throughout the country. The Government has followed the policy of never constructing a building if it could possibly rent one. Thus, the Government of Palestine in Jerusalem, the Chief Secretary, the Supreme Court of Palestine, the Police Headquarters, the various District headquarters, and hospitals, asylums, colleges, schools, post offices, workshops and stores are housed in buildings hired away from other purposes and usually unsuited for their present uses. Government House in Jerusalem (where the High Commissioner resides and holds office), the Jerusalem Post Office, the Jaffa Post Office, and the Municipal Administration Building in Haifa are—apart from police stations—the only truly modern Government buildings in the country; the Municipal Hospital in Haifa also stands out as an exceptional institution. The contrast between the numerous and spacious modern police stations and the lack of facilities for other and more constructive purposes reflects the primary interest of the Government.

The rents paid by the Government for these buildings rise as each lease (usually short-term) expires and no alternative accommodations present themselves. The amount spent on repairs each year is considerably greater than the cost that would have been incurred had the Government constructed its own buildings in the first place.

The Arab town schools provide one of the most flagrant examples of the inadequacy of public buildings. The Government has built very few new schools; most of the schooling is carried on in State Domain buildings inherited from the Ottoman regime or in private houses hired for the purpose. Pupils are turned away due to inadequate school rooms, and the small classrooms are overcrowded to the extent of being a menace to public health. Of the 26,000 school places in Arab town schools in 1940, less than half were classified by Government as satisfactory accommodations. This does not allow for the pupils who had been turned away from the schools, nor for the lack of accommodation in areas where no schools exist at all.

Level of Rents and Rate of Return

Overcrowding in relatively prosperous times reflects a scarcity of residential accommodations which, in turn, makes for relatively high rentals in the absence of governmental regulation. And this is the situation that prevailed in Jewish Palestine prior to World War II. A special census of labor covering nearly 10,000 wage earners in Tel Aviv in 1937 disclosed the following:

RELATION OF RENTS TO WAGES, 1937

Wages per month (£P)	*Average rent paid (£P)*	*Percent of wages paid in rent*
2-4	1.27	42.3
4-6	1.51	30.2
6-8	1.80	25.9
8-10	2.33	26.0
10-15	3.07	24.6
15-20	3.93	22.5
20-25	5.18	23.0
25-30	6.10	22.2
30-40	6.60	18.8
40-50	7.42	16.5

Source: Horowitz and Hinden, *op. cit.*, p. 111.

As might be expected, the percentage of wages paid in rent was lower in the higher income groups, although the very high percentages in the first two classes are not particularly significant since very few workers received less than £P 6 per month. The survey indicates that on the average about 25 percent of family wages were expended on rents. In Canada, the United States, Colombia and Switzerland, the comparable percentages were 18 to 20, and in Germany, Lithuania, and Japan, 13 percent.

The amount of the rental payments was not high relative to construction costs. However, the very low incomes caused rents to be a serious burden on the working population.

There is considerable difference of opinion in Palestine as to whether rentals in the prewar period provided a reasonable return on investment. In many areas, and especially for multi-unit residential structures in the cities, rents tended to yield a gross return of some 10 to 12 percent of value per year. This ratio compares very favorably with the rent-value relationship in the United States in good times. There was relatively little vacancy at any time, taxes were quite low, and because of the simple type of structures, repairs were relatively cheap. A number of experts in the country testify that net returns of 6 percent of gross value were generally achieved. On the whole, it may be concluded that before the war, housing offered no less attractive an investment in Palestine than in the United States.

Cost Components

The factors that made for the unsatisfactory level of housing cannot be analyzed systematically because of the paucity of data. Scattered data indicate, however, that construction costs in Palestine have been high relative to the standard of accommodation provided and the level of other prices in the country. By absolute standards, due to the simple structures and less ample space than is provided in advanced countries, costs have been low. Unfortunately, data on total costs are most fragmentary and do not provide a basis for an exact weighting of the importance of the more important cost components. We are obliged, therefore, to discuss each of the components separately.

Speculation in land has been rife. Without the deterrent of a capital gains tax, such speculation is a natural concomitant of converting relatively large sections of unimproved land into residential areas at a rapid rate—as was the case in Palestine. The rise in urban land prices during Palestine's greatest prewar building boom is shown in the table on the following page.

In the cities listed, the rise was very sharp from year-to-year through 1935. With the disturbances and the Ethiopian crisis, immigration slowed down and land prices began to recede—a trend that continued to 1939. Land for commercial structures was subject to the same speculative influences as the land for residential purposes. It is noteworthy that the price rise was steepest in Tel Aviv, which received the largest influx of immigrants, and least in Haifa where the Jewish National Fund and the Bayside Land Corporation, a quasi-public enterprise, have large land holdings which are used to exert a restraining influence on speculative dealings.

Sociological factors inherent in the situation serve to reenforce the speculative interests. Among these factors are the tendency for people to cluster for security, a natural urge of the Jewish immigrants to go where large numbers of Jews are already located, and a sentimental desire to own property in the Homeland.

In many cases, the speculative bidding up of land has resulted in land costs accounting for 30 percent of total investment compared with 10 to 20 percent in Europe. Since the cost of capital is a highly important rent-determining factor, anything that adds to the amount of capital needed contributes to the raising of rents. High

AVERAGE LAND PRICES IN THREE PRINCIPAL TOWNS IN PALESTINE, 1932-36

	Prices per square meter in £P				
	1932	*1933*	*1934*	*1935*	*1936*
Tel Aviv:					
Merkas Tel Aviv	1.065	2.220	3.300	5.800	4.000
Lev Tel Aviv	1.065	2.220	4.445	6.700	4.900
Commercial Centre	1.330	2.500	4.450	5.800	4.900
North of Tel Aviv	0.390	1.510	2.220	3.120	2.220
South of Tel Aviv	0.390	0.890	1.510	2.130	1.780
	Index				
Tel Aviv:					
Merkas Tel Aviv	100	208	308	541	375
Lev Tel Aviv	100	208	416	625	458
Commercial Centre	100	180	333	433	366
North of Tel Aviv	100	384	567	795	567
South of Tel Aviv	100	227	386	545	454
Average index	100	249	402	588	444

	Prices per square meter in £P				
	1932	*1933*	*1934*	*1935*	*1936*
Jerusalem:					
Rehavia	0.710	1.240	1.780	3.200	2.840
King George's Ave. (between B. Yehuda St. and Rehavia)	5.350	7.100	8.900	12.400	11.300
King George's Ave. (near Jaffe Rd.)	7.100	11.300	13.300	17.800	16.000
University	0.268	0.310	0.390	0.710	0.533
	Index				
Jerusalem:					
Rehavia	100	175	250	450	400
King George's Ave. (between B. Yehuda St. and Rehavia)	100	133	167	233	200
King George's Ave. (near Jaffe Rd.)	100	150	188	250	225
University	100	113	147	267	200
Average index	100	143	188	300	256

	Prices per square meter in £P			
	1930-31	*1932-33*	*1934-35*	*1936-37*
Haifa:				
Hadar Hacarmel	0.975	2.400	3.000	2.250
Har Hacarmel	0.450	0.550	1.150	0.800
Bat Galim	0.400	0.400	0.800	0.600
Neve Shaanan	0.100	0.120	0.210	0.130
Kiryat Eliyahu	0.200	0.550	0.600	0.500
	Index			
Haifa:				
Hadar Hacarmel	100	246	308	231
Har Hacarmel	100	122	256	178
Bat Galim	100	100	200	150
Neve Shaanan	100	120	210	130
Kiryat Eliyahu	100	275	300	250
Average index	100	173	235	188

Source: "Development of Land Prices", by Dr. Alfred Bonne in *Housing in Jewish Palestine*, Economic Research Institute of the Jewish Agency, Jerusalem, 1938.

land prices also create pressures for the maximum exploitation of the land, leaving little or nothing for gardens, public utilities, parks and other open spaces. In an economy of capital scarcity, such as Palestine's prior to the war, speculation in land often freezes capital for long periods in unproductive investment. There can be little doubt that it has proved a formidable obstacle to an adequate social housing policy.

Reliance in the prewar years on imports for about 70 percent of all building materials was a factor tending to reduce the cost of construction. During most of the thirties, many of these commodities were among those sold in Palestine at dumped prices. Accordingly, there would appear to be little chance of reducing the cost of building materials below this level except by more economic utilization and handling of materials.

Wages of building and construction workers, either in absolute terms or in relation to wages of Jewish workers in other industries, were not high. On an annual earnings basis, Jewish construction workers in 1936, according to the National Income estimate, received less than Jewish workers engaged in manufactures, commerce and transport, but more than those engaged in agriculture and the services.

In relation to the construction workers' productivity, however, wages must be regarded as high. This was particularly true during the earlier years of the Mandate when almost all the workers had had no previous experience in construction and had to acquire their training on the job. While the quality of construction work had been vastly improved by the outbreak of World War II, there was still scope for considerable increase in efficiency.

According to one rough estimate, it appears that in the Jewish community about three-quarters of a man-year (assuming a man-year of 2,000 hours) is required to construct one room plus its essential facilities. This includes employment on the site of construction and also employment in producing whatever local materials and supplies are used. In the United States, on much the same basis, about three-fifths of a man-year per room is needed.*

There seems to have been considerable inertia against the fuller utilization of labor-saving machinery. The fact that so much of the residential building was executed on an individual basis, rather than as a series of large-scale building operations, has also militated against the economical use of machinery. The same consideration has precluded the possibility of effective utilization of standardized prefabricated windows and window frames, doors and door frames, etc. The failure to plan and build on a sufficiently large scale has entailed unduly high costs per room for land development and community facilities and amenities.

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* Since practically all building materials are produced domestically in the United States while a large part of all materials in Palestine is imported, the margin between the estimates is appreciably widened.

The importance of quality of construction needs to be given more emphasis. It is the most significant factor determining annual maintenance costs, and more seriously, the rate of amortization.

The cost of the use of capital and its rate of repayment have constituted the single highest barrier to lower rents. The general reasons for the relative dearth of capital in Palestine are analyzed at a later point. In the field of long-term mortgage credit, however, there has been a special reason—the severe limits on the possibility of diversification of risks. In the prewar years, the combined general and special considerations resulted in first mortgages bearing interest at 8 and 9 percent, and covering only 50 to 60 percent of the building costs, excluding the cost of the land. Figured on total costs, the first mortgage has covered only 35 to 45 percent of total outlays. Moreover, they have been of the installment type, with a repayment term of 15 to 16 years. Under such financial arrangements, the owner had to possess relatively large sums of capital at the outset or obtain second and third mortgages at still higher rates of interest and for a shorter term of years. The builder, moreover, frequently had to apply to the same institutions for accommodation during the construction period.

The estimate by Naphtali of first mortgages issued in 1934, a boom year in building, is typical of the source of funds available:

SOURCES OF FIRST MORTGAGES, 1934

General Mortgage Bank	£P 700,000
South African Binyan Co.	100,000
Other banks	100,000
Private mortgage loans	900,000
Insurance companies	50,000
	£P 1,850,000

Source: Quoted in "Prerequisites for Cheaper Rents" by Ernst Kahn and Fritz Naphtali in *Housing in Jewish Palestine, op. cit.*

In addition, there were advance payments of rents estimated at £P 50,000, the general short-term credits granted to finance deliveries of building materials and contracting estimated at £P 800,000 to £P 1,000,000, and the short-term and intermediate credits from banks, saving banks and private persons estimated at £P 300,000 to £P 500,000. Conspicuous by their absence are loans provided by the Government or by the Jewish national institutions —the funds of the latter during these years being directed largely to agriculture.

Quasi-public Housing

Thus, the major impediments to more adequate urban housing in the Jewish community prior to the war were the cost of capital and land prices. Government action in both areas has been regarded as appropriate in many Western countries. In Palestine, however, the Government neglected this responsibility and restricted its activity to the remission of property taxes for the first three years of the life of the building. It devolved upon the Histadruth and the Jewish Agency to attempt to fill the breach. With limited resources and powers, their contribution to the resolution of the major problems was severely circumscribed.

The Histadruth's effort in providing cheaper housing to urban workers was largely restricted to the activity of Shikun, Ltd., organized in 1935 as successor to "Merkaz Hashikun" (Housing Center), founded in 1930. Shikun does not build on its own account. It acquires land, if possible with the assistance of or from the Jewish National Fund, provides for the plans, expenditures, and execution of buildings, construction of roads, water supply, and finally, for the organization of the settlers into cooperative societies.

By 1940, Shikun had acquired land in and around Tel Aviv, Haifa and Jerusalem to settle 11,000 families. Prior to the prohibition of private building during the war, Shikun had completed 3,125 flats and houses at a cost of £P 1,355,000. Nearly 6 percent of the units were constructed in Jerusalem and the remainder was distributed in about equal numbers between Tel Aviv and Haifa.

Slightly more than half of the investment, £P 735,000, has been supplied by the 3,125 families settled, or an average investment per family of £P 203. Obviously, only the workers with the highest incomes would possess capital of this amount. The remainder of the investment, £P 620,000, was raised from workers' credit organizations, General Mortgage Bank, Bizur, Jewish Agency, Palestine Mortgage and Credit Bank, the Unemployment Insurance Funds of the Histadruth and two British Insurance Companies.

Shikun and the cooperative societies did not have access to credit on cheaper terms than individuals. To the extent that Jewish National Fund land was made available, land was acquired on more advantageous terms than could have been done individually. The resulting rents, nevertheless, were relatively high, amounting to one-third of the income of the better-paid, skilled workers and white collar personnel. A survey of Shikun members disclosed that 60 percent were obliged to sublet one room.

The contribution of Shikun during these years was not low cost housing to low income workers. Rather, for the same rental, it provided better housing due to more intelligent planning, and devised a cooperative arrangement that provided the individual member with flexibility, yet virtually precluded speculative resale of his equity. Even for this class of workers, its operations prior to the war were not extensive.

The Jewish Agency has contributed to the alleviation of the housing problem principally by subscribing capital to institutions which in turn issue debentures for the purpose of financing construction. One such enterprise is Bizur, Ltd., owned jointly by the Jewish Agency and the Histadruth. Upon the completion of the fiscal year 1938/39, Bizur had invested £P 175,000, or 40 percent of its total commitments, in building projects. The other important company in this category is the Rural and Suburban Settlement Company (Rassco), established in 1934 by the Jewish Agency for promoting the establishment and development of agricultural and suburban settlements designed to meet the requirements of the middle class. All stock is owned by the Jewish Agency and it operates either on private or Jewish National Fund land. In the latter case, title to the land does not pass to the owner of the building: he is required either to pay a large sum in advance or a moderate annual payment for long leasehold rights. Rassco assumes full responsibility, from land amelioration to road construction, supply of water and planning and building of the houses. Prior to the outbreak of war it had developed such thriving communities as Kfar Shmaryahu, Sdei Warburg, Shavei Zion, Beth Itzhak, and others. While its accomplishments should not be minimized, its objectives were much easier to achieve than those of low cost urban housing, since it was dealing with middle class families of moderate means.

HOUSING AND CONSTRUCTION DURING THE WAR YEARS

The onset of World War II involved the virtual cessation of private building in order to satisfy military construction requirements in Palestine and the Middle East. The sharp decline in private building is reflected in the new building authorized in Jerusalem, Jaffa, Tel Aviv and Haifa, as shown in the table appearing on p. 254.

Private construction in 1942 was valued by the Government Statistician at £P 493,000, while governmental and military construction was valued at £P 5,628,000. The total value of construction in 1942 nearly equalled the value of construction in 1936. In the latter year, however, private construction accounted for 80 percent of total construction, and in 1942, only for 8 percent.

Because of the shift to military construction, which is a cheap type of construction, the volume of construction measured in monetary terms conceals the extent to which the industry drew upon the labor force. In 1942, according to official estimate, 63,000 persons, Arabs and Jews, were employed in construction. This represented 10.6 percent of the labor force, while only 5 percent of the total Palestinian labor force was so employed in 1936. For the Arabs this involved nearly a four-fold increase of workers in construction between 1936 and 1942, and a tripling in relative terms. For the Jews it involved an absolute increase of about 50 percent and a relative decline. Since the military construction did not require highly skilled workers, the Arab workers came to dominate the industry and the more skilled among the Jewish workers transferred to other industries.

IMPACT OF WAR ON PRIVATE CONSTRUCTION

Year	*Floor area in square metres*
1935	1,214,608
1939	223,639
1940	151,674
1941	65,614
1942	61,152
1943	24,680
1944	82,911

Source: *General Bulletin*, Feb., 1945, p. 65.

Overcrowding in Wartime

At the very time that there was a drastic curtailment in private building, there was a commandeering of residential quarters for military offices and officers' billets. More seriously, the non-military population continued to expand: the Jewish population increased by 17.7 percent between 1939 and 1944, the non-Jewish population by 15.0 percent. Under such conditions the adequacy of the housing could only deteriorate still further.

The seriousness of the overcrowding in the urban Jewish communities was revealed by several surveys. A survey of Tel Aviv in 1944, for example, disclosed that the average number of persons per room had risen to 2.4 compared with 2.1 in 1937. Over 30 percent of the population averaged more than 3.9 persons per room, and an additional 20 per cent averaged more than 3 persons per room—and this in a modern city.

A survey of the Jewish lower-income groups of Jerusalem (to which more than one-half of the Jewish population belonged), showed that in 1943 approximately 3,000 families lived more than 3.9 persons per room. In this lower-income group, 23 percent averaged 6.2 persons per room, an additional 26 percent averaged 4.7 persons per room, 11 percent 4.2 persons per room, and 29 percent between 3 and 4.2 persons per room. Only 11 percent of this group averaged less than 3 persons per room.

In 1942 and 1943 crowded living conditions among both Jews and Arabs contributed to an outbreak of bubonic plague in Haifa and Jaffa and in a typhoid epidemic in Tel Aviv. Around Haifa there are a large number of unsanitary and indescribable temporary shacks built of wood and tin and various discarded materials, in which the Arab workers live. Some of these makeshift houses were demolished in the anti-plague drive of 1942 and 1943, but they were soon rebuilt for lack of other facilities.

The only improvement over the prewar situation was the ratio of rentals to family income. During the war, due to the control exercised by the Government, rentals did not increase greatly over the prewar levels. An inquiry into the expenditures of working class families in early 1942 revealed that expenditures for housing by Arabs were 16.1 percent of all their expenditures and among the Jews 18.2 percent, compared with 25 percent prior to the war. Thus, as a result of rent control and the very marked increase in wages, the ratio of rent to income became much lower than before the war. The present relationship between rents and the current value of buildings, however, is also very low because of the inflation of realty values. Consequently, landlords have fought bitterly against rent control, but without success. Some of them have evaded the ceilings by demanding that new tenants pay them "key money" —a large sum of money for the key—and many tenants have rented furnished portions of their apartments to subtenants, who often pay more than the basic rent of the entire apartment. But on the whole, the government has been successful in "holding the line" on rents for occupants who were lucky enough to be well-situated before the war.

Wartime Building Costs

The construction industry felt the full impact of the wartime inflation. In the case of land prices the general inflationary pressures were reenforced by the White Paper policy of restricted land sales to the Jewish community. This policy reduced the supply of land at the very time that the supply of money was greatly expanded. The net effect by 1944 was a 2½-fold increase in the price of urban or suburban land over the prewar price, while land development costs more than trebled. The price of land in the Haifa Bayside, for the reasons previously mentioned, underwent a much more moderate rise.

Many of the prewar building materials which were imported at "dumped" prices were virtually embargoed during the war as far as Palestine was concerned. Under the protection of this embargo, Palestinian manufacturers undertook to replace the production of some of the materials formerly imported, although based of necessity in many instances on imported raw or semi-processed materials. These latter materials cost much more than they did in the thirties. The cost of imported iron bars, rods, and girders, illustrates the importance of this factor. In 1939, these materials were imported at £P 10.8 per ton and in 1944 at £P 30.9. Added to high material costs were the customary inefficiencies of new enterprises and the inflated costs of manufacturing that prevailed generally. According to the estimate of the Economic Research Institute of the Jewish Agency, from 1939 to 1944, building materials costs increased by 350 percent.

The wartime experience, nevertheless, has enabled some of the manufacturers of building materials to take root with the result that 70 percent of the finished building materials now can be produced locally, compared with 30 percent before the war. This enhances the absorptive capacity of manufacturers and also reduces Palestine's dependence on foreign materials, which will be in short supply during the transition period.

Wages of construction workers also rose sharply but not quite as much as the price of building materials. The following tabulation of daily wages in selected occupations probably is typical of the experience of all construction workers:

IMPACT OF THE WAR ON CONSTRUCTION WAGES

	Percent increase in daily wage between 1939 and Oct. 1944	
	Arab labor	*Jewish labor*
Stone masons	193	212
Shutterers	371	188
Plasterers	231	184
Steel benders		174
Unskilled construction laborers	405	233
All workers in manufactures, including cost-of-living allowance		206

Source: Based on absolute figures published in *General Bulletin*, April, 1945, p. 230. In occupations with more than one class, unweighted average is used. Figure for Jewish workers in manufactures adapted from *Statistical Bulletin* (Summary 1944), Department of Statistics, Jewish Agency.

Unlike the practice in manufacturing industries, there was no formal plan for paying a supplementary cost-of-living allowance. Daily wages were adjusted to provide for the rise in the cost-of-living. Noteworthy is the fact that the wage differential between Arab and Jewish workers had been appreciably narrowed.

The efficiency of the workmen was probably lowered despite the rise in daily earnings. This is suggested by the fact that many workers, both Arabs and Jews, entered the industry for the first time and that many of the more skilled workers among the Jews, no longer needed for the more simplified construction required for military purposes, shifted to other industries. Thus, the construction industry in the Jewish community enters the postwar period with a scarcity of skilled workers and with wage rate increases at least as large as those in manufactures but without the latters' safeguard of automatic reductions as the cost-of-living index declines.

Of all the cost components, the cost of financing is the only one that showed any decrease during the war years. The financing problem prior to the war had a three-fold aspect: the interest rate was too high, the period of amortization too short, and the share of total construction costs covered by the first mortgage too small. The abundance of capital in the possession both of individuals and financial institutions resulted in some easing of the costs of capital. The General Mortgage Bank for Palestine, which has continued to dominate the mortgage field, was granting mortgages in 1944 at 6 percent for 20 years. The comparable figures for the years prior to the war were 8 to 9 percent for 15 to 16 years. It was limiting loans during the war to 100 percent of the prewar building costs plus 60 percent of the prewar value of the land, resulting in a loan equivalent to roughly 50 percent of the total current cost of the house alone. This is no improvement over the prewar coverage of first mortgage loans.

All these considerations increased building costs from 1939 to 1944 by 280 percent according to the estimate of the Economic Research Institute of the Jewish Agency. For the more simple structures, the increase was perhaps slightly less since it was possible to rely more fully on domestic materials. For the more elaborate residential units, the rise in cost was greater than that indicated by the above percentage.

These figures are borne out by other data. The Haifa Bayside Land Corporation reports that a two-room detached house which in the prewar period would have cost £P 480, required an outlay of £P 1,550 at the end of 1944, more than a three-fold increase over prewar costs. The land and development portion increased from £P 190 before the war to £P 525 at the end of 1944. Land alone increased 2½ fold, whereas development costs more than trebled. The cost of the building itself rose from £P 290 to £P 1,025, which is more than 3½-fold. For a two room semi-detached house, total costs rose from £P 370 before the war to £P 1,250 at the end of 1944.

Costs also vary in different parts of the country. A simple one-room expansible unit built for immigrants south of Tel Aviv required an outlay of roughly £P 300 for construction alone. This same unit would have cost £P 400 in Haifa because wage rates generally have been higher there although lower land costs in Haifa would offset part of this disadvantage.

It would appear that a reasonable estimate of average wartime costs (exclusive of land) would be £P 400 to £P 500 per room, as compared with an average prewar cost of about £P 150 per room. Thus, at the beginning of 1945, a two-room unit in Palestine would have cost £P 1,000 or, at the current rate of exchange, $4,000.

SUMMARY

Even after the building boom of the middle thirties, the housing conditions for a large fraction of both Jewish and Arab populations must be characterized by Western standards as deplorable. The overcrowding was acute, and the rentals required a disproportionate share of family income. The major obstacles to cheaper rents were land speculation and the costs of capital. In the absence of government assistance, several quasi-public housing schemes were launched. They have not been able to make any major contribution to the solution of the problem because of their restricted scale of operations and their inability to build cheaply.

The exigencies of the war only served to aggravate a difficult situation. Although rent control was generally effective, overcrowding continued to grow worse with increases in population and sharp reductions in private building. Building costs became even more distorted. To the prewar problems of land and capital costs now must be added a highly inflated cost of building materials and a nearly equally inflated wage structure for building workers, whose efficiency has been impaired by the loss of the more skilled Jewish workers to other industries.

It is obvious that the high cost of construction prevailing during the war created a situation which is wholly untenable in terms of stimulating postwar construction. The rise in the price of homes, if fully reflected in rent, would create an impossible relationship between rent and income. This is the postwar challenge presented to the private builders, quasi-public institutions and, especially, to the Government.

CHAPTER 17

TRANSPORT, TRADE AND SERVICES

IMPORTANCE IN PALESTINE'S ECONOMY

The group of activities comprehended in transport, trade and services is very important in the economy of Palestine. It accounted for about one-fifth of the total gainfully occupied in the past decade. In the Jewish economy alone these activities were even more important. About 34 percent of the Jewish labor force was engaged in these activities in 1939 and as much as 32 percent in 1942; these are larger shares than were engaged in either manufacturing or agriculture.

TRANSPORT

Oceanic

Transport by sea has been very important to Palestine because of the large role of international trade in her economic life, particularly in the Jewish sector. Shipping was also necessary to handle the offtake of the Iraq oil pipline at its Haifa terminus. Moreover, as Palestine became able to take advantage of its central location, the Palestinian ports partially replaced Alexandria and Beirut in supplying Syria, Iraq and Iran. While the tonnage of dry cargo handled in Palestine ports rose from 492,000 in 1930 to an average of 1,399,000 in 1935-39, in all Syrian ports the tonnage rose only from 688,000 to 728,000. Even at its prewar peak, however, Palestine handled only about 60 percent as much cargo as Alexandria.

Officially Palestine has five ports. Two, Acre and Gaza, have only local significance and are served chiefly by sailing vessels engaged in coastwise traffic. Jaffa port, dating from Biblical times, and Tel Aviv, constructed during the disturbances of 1936-39, are no more than lighterage basins serving ships that must anchor two to three kilometers offshore in the open roadstead. The fifth port, Haifa, is a protected, deep-sea harbor constructed in a natural bay. Once there was a firm decision to bring the Mosul oil by pipeline to Haifa, the Government decided to build a modern harbor there. A British contracting firm completed the undertaking in

1933 at a cost to the Government of £P 1,555,000 (covered by the first Palestinian Loan).

The inner harbor is composed of two breakwaters: the western one, 2,250 meters long, is arched; the eastern breakwater is 765 meters. The entrance is 200 meters wide with a depth of 11.5 meters. The shore roads are constructed in part as quays. Six dry cargo ships of 8 to 10 thousand tons burden can be accommodated simultaneously for direct loading and unloading; in addition the oil dock can accommodate two tankers. Additional ships must tie up at the breakwater and unload by lighters. There are spacious sheds for general transit storage, though poorly spaced from the point of view of efficient transportation. There is also a quayside railroad track, though it is of limited utility since its dead-end terminus is the cause of much congestion. With the transfer (during wartime) of the port administration to the Director of Railways, an efficient integration of Haifa's rail and dock facilities was achieved.

During the 4 years preceding the war, an average of 3.0 million tons of cargo, including crude petroleum, was handled at all five Palestinian ports. The tonnage entered and cleared (presumably including petroleum products) amounted to 2.3 million in 1942 and 3.5 million in 1943. The relative importance of the several ports in peacetime is shown by the distribution of the tonnage discharged and loaded, excluding crude petroleum, in 1935 and 1938. All petroleum products were loaded at Haifa.

TONNAGE HANDLED, BY PORTS

	1935 *(Pct.)*	*1938* *(Pct.)*
Total dry cargo	100	100
Haifa	61.4	62.8
Jaffa	38.1	20.8
Tel Aviv		15.5
Acre and Gaza	.5	.9

Haifa's domination is largely attributable to its vastly superior port facilities. Were they to have equal facilities, much the larger part of the sea-borne traffic would use the Jaffa-Tel Aviv ports, since a large part of the Jewish population and industry (and thus the major market for imports) and most of the citrus crop (which constitutes the bulk of the non-petroleum exports) are concentrated in this area. During the war, virtually all shipping was concentrated in the Haifa port. The much more expeditious unloading and loading in the sheltered Haifa harbor, compared with the unprotected roadsteads at Jaffa and Tel Aviv, meant a quicker turnaround and a saving of shipping space.

To the sea-borne traffic in commodities must be added the passenger traffic of the immigrants and tourists. Prior to the outbreak of war, on the average 80 thousand persons per year booked passage either to or from Palestine. The movement reached a much higher figure in times of internal peace and declined sharply in times of disturbances.

In the closing years of peace, Palestine's harbor facilities seemed adequate for the existing volume of overseas traffic. The bulk of the traffic could be handled efficiently at Haifa, with Jaffa and Tel Aviv lighterage basins serving as reserve capacity capable of assuming the seasonal strain that otherwise would be placed on the Haifa port during the shipment of the citrus crop in the winter and spring months. There appeared to be no convincing economic evidence to justify the construction of a protected deep-sea harbor at Tel Aviv unless such construction was to be in anticipation of the country's needs after a period of mass immigration.

The shipping service also seems to have been adequate, with the exception of an insufficient number of fast or refrigerated boats for the shipment of the late oranges. Before the war the majority of the steam vessels calling at Palestine ports were British and Italian while most of the sailing vessels were Syrian and Egyptian.

On the reasonable assumption that 70 percent of the prewar traffic in goods and passengers concerned the Jewish community, the Jewish Agency estimates that the Jewish community expended annually about £P 2.3 millions on shipping. It also estimates that before the war some 10 passenger ships, manned by about 1,500 seamen, were permanently employed in the transport of Jewish immigrants and passengers. About an equal number of seamen were required to operate the 60 freight ships of about 200,000 tonnage needed to handle Jewish Palestine's freight traffic.

As early as 1934 Jewish interests made an effort to participate in this traffic. In that year three shipping companies were organized: the Palestine Shipping Company, the Palestine Maritime League and the Atid Company; the latter two survived to the outbreak of war. The fleet of all three companies consisted of seven ships with a total tonnage of 15,000; about 200 Jewish sailors and seamen were employed. The first two maintained a passenger and cargo service between Palestine and southern and eastern Europe, and Atid operated a coastal freight service. At about the same time the Haifa Lighterage Supply Company was organized. Jewish dock workers and stevedores arrived from Salonika. In the late 1930's about half of the workers in the Haifa port were Jewish. After the opening of the Tel Aviv port, about 2,000 Jews earned their living in maritime enterprises.

Jewish recognition of these new interests was formalized by the creation of the Maritime Department of the Jewish Agency in 1937. Cooperating with Nachshon, a maritime company of the General Federation of Labor (Histadruth), the department sponsored a revival of Jewish sea fishing. In cooperation with the Palestine Maritime League, it sponsored the opening of a nautical school in Haifa.

For the duration of the war, there was no further maritime development except in the field of nautical training. The boats and crews of the two surviving companies were transferred to the British Ministry of War Transport. But close upon V-E Day, plans were under way for the rehabilitation and further development of the Jewish shipping industry. An operating instrument was established in the form of a sem-public company by the name of ZIM (Jewish Merchant Fleet), with a registered capital of £P 500,000. Ordinary shares of £P 200,000 have been subscribed in equal amounts by the Jewish Agency and the Histadruth. The balance will be issued as 4-percent cumulative participating preference shares. The company proposes to operate ships under its own name, in some services, and to encourage private initiative in developing other shipping services.

The Jewish community accordingly is committed to the development of a merchant marine despite the inherent difficulties in the Palestinian trade, the intense competition among countries for shipping that existed prior to the war, and the large amount of new tonnage now in the hands of the U. S. and U. K. The merchant marines of most countries were subsidized before the war and will no doubt be subsidized again. Life for the seamen was hard and the pay low. The uneven flow of Palestinian traffic, moreover, makes for difficulties in securing full use of ships; both the citrus and tourist trade are concentrated in the winter and spring seasons. During the remainder of the year the ships could carry for other countries, but the specialized fruit-carrying vessels might have difficulties in adapting to other cargo.

Rail Transport

With the exception of the very first railroad constructed between Jaffa and Jerusalem, Palestine's rail network was not initially developed to serve commercial or industrial interests. The line between Jaffa and Jerusalem was built by French interests, who acquired discarded rails and rolling stock once used in the construction of the Panama Canal with the idea of profiting from the carrying of tourists and pilgrims from Jaffa Port to the Holy City. This occurred in 1890. The other lines (shown in the map in the end-papers at the back) were constructed by either the Turkish or British governments to serve military needs or for a combination of military, political, and religious purposes. It was the latter combination that motivated the Turkish Government at the turn of the century in the construction of the Hedjaz railway, ostensibly for the use of pilgrims traveling to Medina and Mecca. In order to eliminate the possibility of foreign interference, the little-known port of Haifa was selected to serve this railway, rather than Beirut, which was under French influence. A narrow-gauge track, to conform with the Syrian and Hedjaz system, was laid to connect the latter at Dera via Zamakh and Afuleh to Haifa and from Haifa to Acre. This line had been completed by the outbreak of World War I.

Since only the two lateral railroads were in existence when Allenby invaded Palestine, it was necessary for each of the belligerents to construct his own railroad. The British, advancing from Egypt, laid standard-gauge tracks, conforming to Egyptian practice, starting at El Kantara on the Suez Canal, continuing across the Sinai peninsula and entering Palestine at Rafa. As the campaign progressed, this railroad was extended up the coast within the protective range of British naval guns to Lydda, there to join the line to Jerusalem. After the armistice, the Lydda-Haifa link was completed. The Turkish authorities needed rail facilities in a southerly direction out of range of the British naval guns. Consequently their railway started from Afuleh and extended along the eastern boundary of the coastal plain to Jenin, Tulkarm and Lydda. Both armies built hastily and with second-hand materials.

Only two additions have been constructed since World War I, despite the country's economic development: a branch line of 7 kilometers running from Ras el Ain to Petah Tiqva, built in 1922 by the Government in conjunction with the Petah Tiqva colonists, and the extension during the course of World War II of the Haifa-Acre line to Tripoli, completing the rail link between Egypt, Turkey, and Europe.

The British Government, after the establishment of the Mandate, made the following disposition of the various rail properties:

(1) The Rafa-Haifa line was sold to the Government of Palestine.

(2) The Jaffa-Jerusalem line was sold also to the Government of Palestine, but the purchase price was turned over to the concessionnaire.

(3) The El Kantara-Rafa line across the Sinai Desert remained in the ownership of the British Government. It is operated by the Palestine Railways, on behalf of His Majesty's Government, for a fixed fee. The profits are paid to His Majesty's Government

except for the proportion of the capital held by the Palestine Government, amounting to about 12 percent.

(4) The Hedjaz Railway has remained under British control, with its ownership in dispute. The Palestine Railways has operated 527 kilometers of the Hedjaz line, comprised of the narrow 105 c.m. gauge railway between Haifa and Samakh, the branch from Haifa to Acre, and the whole section in Transjordan from Nassib to Maan. Trains from Haifa to Transjordan have to traverse a section of the Hedjaz line in Syria that is not operated by the Palestine Railways.

(5) No disposition has been made yet of the military extension from Acre to Ras en Naqura, the part of the Haifa-Tripoli line within the boundaries of Palestine.

The railways in Palestine thus were developed piecemeal and without any regard to operating efficiency and maximum usefulness to the community or the economy. Routes are circuitous and single tracked, the roadbed is poorly ballasted, the rails and ties are second-hand, and much of the rolling stock dates from 1895, particularly the coaches, many of which were brought to the Middle East for ambulance trains in World War I.

Because of these physical deficiencies, the Palestine Government's purchase price of £P 1,600,000 was a highly inflated one. The high price is particularly burdensome because of the very limited role that even a well-planned railway system can play in Palestine, especially since Palestine's development coincided with the "automobile era." Transportation by rail is economical only over long distances and for bulk commodities. The small size of Palestine precludes any considerable travel over long distances within the country, and its economy by the nature of its agriculture and its limited mineral resources does not require the movement of any substantial volume of bulk freight. The railroad train, however, is well suited for the long distances passengers must travel to reach the neighboring countries to the south and to the north. But until recent date there was rail connection only with Egypt. Moreover, freight destined for these countries could be moved more cheaply, in most cases, by ship. Railroads are of declining relative importance in most modern countries; the factors making for decline are particularly strong in Palestine.

The Government of Palestine, however, was more interested in protecting its investment than in providing an efficient transportation system. To this end the Government attempted to hamper the development of road transport by (1) delay in carrying out necessary road building and maintenance; (2) heavy taxation of the motor transport industry; and (3) a rate structure on the railroads designed to check the competition of motor transport. Economic and political factors combined to doom this effort to failure. By 1939 the national income originating in rail transport amounted to £P 200,000, compared with £P 900,000 in road transport.

At the outbreak of World War II the railroads were being reduced to a role which the economics of the situation dictated. Revenue from passenger traffic had declined by more than two-thirds from the early thirties to 1939 and constituted only 20 percent of total revenue in the latter year as against 33 percent earlier in the decade; as much as 30 percent of all passenger revenue originated on the Palestine-Egyptian line. The competition of motor transport was greatly aided by the deficiencies of the railways. According to one informed critic, "Most stations are remote from the localities they serve: trains run slowly, lines are roundabout, and therefore journeys are protracted; delays and unpunctual service are no unusual occurrences, whilst the Jews—who constitute the greater part of the travelling public—have been further deterred from rail travel by having to deal with Arab officials unable to speak their language."

While the decrease in freight tonnage was much more moderate, the composition of the tonnage was increasingly restricted to bulk commodities. In 1938 at least 75 percent of all tonnage was of this character. It consisted principally of goods loaded on a large scale from ships or other railway systems or such commodities as must be collected for shipping abroad, such as citrus, barley, potash, Nablus soap, etc. Internally the railroads have served as carriers chiefly for the quarry works producing stone, salt, sulphur, sand, etc., as well as for a limited number of industrial enterprises such as the cement works, the producers of edible oils and petroleum products. General merchandise, commonly less suited for rail transport, was particularly handicapped in Palestine by inadequate warehousing facilities and a complicated rate schedule.

The railway system was among the largest employers in the country. In 1939 its staff numbered 4,200, with about one-fifth salaried employees and the remainder day laborers. The average prewar monthly salary was £P 7.5 and the average monthly wage about half that amount. Because of the low wages and compulsory work on Saturdays, Jews constituted less than 10 percent of the staff.

The financial status of the railways during these years is a very difficult matter to ascertain because of the complexity of the accounting procedures. While tortuous details need not concern us, it would appear that the Palestine Railway proper may have earned its way; but on a consolidated basis, including the operated lines, deficits were perennial. The accumulated deferred maintenance was very sizable.

This was the sorry state of the railway system when it was required to assume relatively heavy burdens during the war years. There was not only the movement of military supplies and personnel, but the additional hauling by rail of goods discharged at Kantara on the Suez Canal in order to save shipping. The heavy traffic began late in 1942; thereafter, in the words of the Director of Railways, "the sum of any two months' traffic equalled a total of a normal prewar year." Ton-kilometers (a measure of work done) increased about 250 percent between 1937, the heaviest prewar year, and 1943. The staff was increased by 80 percent and revenue by 211 percent; the latter increase partly reflects a 50-percent rise in rates. Beginning with 1941, there have been continuous and substantial surpluses. This very creditable performance is to be explained in large measure by the appointment of a new, expert, and intelligent management. Perhaps it is poetic justice that the British Government, which saddled the Palestine railways with a heavy debt after World War I, was the principal shipper in World War II and the main source of its profits.

Motor Transport

Despite the Government's negative attitude on the development of road transport, it has become the most important form of internal transportation. One estimate places the volume of freight carried by road transport at about ten times that of the railways; in passenger traffic the difference is even greater. This is an expected development in areas where freight and passengers characteristically move over short distances.

The Government's control over motor transport was exercised chiefly through the road-building program, with taxation as a subsidiary deterrent. At the establishment of the Mandate the entire network of all-weather roads comprised 450 kilometers. In the succeeding 10 years the network was only doubled and in considerable part constructed as feeder roads to the railways. With the outbreak of the 1936 riots, hard-surfaced roads amounted to 1,250 kilometers, roughly 775 miles. The need for greater mobility of police forces during the period of riots led to the construction of an additional 1,000 kilometers in the 3 years 1937-39. It was only at this time that a direct highway between Tel Aviv and Haifa was completed. The military transport requirements necessitated continued extension of the road system, particularly during the biennium 1940-41. In 5 years (1937-41) the kilometerage was doubled. Reference to the map on the end-papers at the back of this book will establish that Palestine now possesses a fairly complete arterial road system, connecting the key points within the country with one another and with neighboring countries.

Road transport more than paid its way as far as the Government was concerned. The Government spent £P 3.2 million from 1922 to 1938 on road and bridge construction and maintenance, compared with revenues of £P 5.2 million during the same years from license fees and custom duties levied on motor vehicles, benzine, lubricating oils, tires, and accessories.

In the 1920's there was a mushrooming of small motor transport operators, engendering a fierce competition which yielded returns insufficient to maintain both proprietor and equipment. By the early 1930's many of the Jewish operators realized that reasonable returns could be had only by combining into large operating units. In the absence of large sums of venture capital and in keeping with prevailing ideology, the mergers took the form of producers' cooperatives affiliated with the Histadruth. The movement made fast headway in bus transport characterized by fixed routes, scheduled service, and fairly stable volume of traffic. Among the Jews in urban passenger transportation, fusion has been carried to the point where there is only one bus company each in Jerusalem and Tel Aviv and four in Haifa, all cooperatives. Negotiations to consolidate the four operating in Haifa have been in progress many months and presumably will be successful as soon as capital values in the industry return to more normal levels. Arab urban passenger traffic was concentrated in four companies.

Over suburban and interurban routes largely settled by the Jewish community there are four large cooperatives, which continue to attract to themselves the remaining small companies. In the Arab sector numerous small enterprises continue to operate, running one or two buses between a village or number of villages and the neighboring town. Even here about half of the Arab-owned buses and taxis are concentrated in the hands of eight or nine medium-sized companies organized as partnerships or private companies.

In the cooperative societies the members work together and share in the profits, assets, and voting rights. Aside from facilitating consolidation, this form of organization provided the necessary flexibility and incentive to weather economic depression, particularly during the years of the disturbances, when there was a substantial decline in interurban traffic. In such circumstances members will work hard for small returns in order to maintain their enterprise. The cooperative form, however, becomes unwieldy when the enterprise reaches the status of a large public utility. A management dependent upon the good will of the workers cannot act on long-term plans, and the obligation to ensure employment for all its members makes it difficult to employ special experts and to maintain discipline and a sense of responsibility on all occasions.

That some of the societies may have exploited their monopoly position cannot, of course, be attributed to the cooperative form. Rather the fault lies with the government authorities for their failure to regulate monopolies. Some advance in recent years, however, has been made in this direction through the work of the District Motor Regulatory Boards.

Moreover, the cooperatives tend to depart from their principles when faced with a large expansion in traffic. New workers are not admitted as members because of unwillingness to guarantee employment on the downswing. This departure has been the cause of a long-standing dispute with the Histadruth.

The development of passenger transportation is indicated by the traffic statistics of the six large cooperative societies.

PASSENGER TRAFFIC OF SIX COOPERATIVES

	1937	*1938*	*1939*	*1943*
	Number of passengers in millions			
Intraurban	51.0	43.5	45.7	88.5
Interurban	9.7	7.6	8.6	22.3
	Index, 1937 = 100			
Intraurban	100	85.3	89.6	173.5
Interurban	100	78.4	92.4	229.8

Personnel engaged by all the passenger transport cooperatives reporting to the Jewish Cooperative Center increased from 1,628 in 1938 to 1,959 in 1943, a gain of 20 percent. In the former year members constituted about 63 percent of the total personnel and in the latter about 58 percent. By virtue of intensive utilization of equipment and higher fares, the increase in income between 1938 and 1943 was 3½-fold, while expenditures on wages, fuel, tires, and spare parts quadrupled. The gross margin amount to £P 141,000 in 1938 and £P 480,000 in 1943, a rise of 240 percent, whereas the number of buses in operation had been increased by only 25 per cent. Wartime business has been very profitable.

Freight transport has remained the domain of the small operator. The Census of Jewish transport in 1937 enumerated 317 establishments operating 614 trucks for hire. Three-fourths of the establishments were individually owned and on the average operated 1.1 trucks and employed 0.4 of a worker. Thus the owner-driver has constituted the backbone of the industry. While some are on permanent hire to the shippers, most have been dependent on the general freight market with the rates and degree of activity fluctuating with the volume of this traffic. These operators possessed so little capital that most of the trucks were mortgaged to the dealers. Unable to accumulate a reserve, many were reduced to the status of drivers in times of depression. Ordinarily such conditions would have led to the formation of large companies using hired labor. Instead there has developed the practice of the individual operators hiring themselves along with their truck to contractors. In the Arab sector much the same conditions have prevailed.

Even the companies and cooperative societies that operated a freight service did not have a large fleet of trucks. According to the 1940 census, 9 private companies owned or hired an average of 9 trucks each, and 10 cooperative societies, 19 trucks each. The latter have specialized in short-distance haulage at the ports and the railway stations, while the private companies have concentrated on long-distance trucking to the neighboring countries.

Mention must also be made of the trucking done by the collective settlements. One source estimates that about 10 percent of all freight hauled by Jews is carried by the trucks of the Kibbutzim (collective communities). Some Kibbutzim specialize in this activity to a large degree. They operate with the advantage of assured loads in transporting farm produce to the urban areas and in supplying the rural settlements with the products of the city.

The sharp rise during the early war years in the cost of the traffic handled by the goods transport cooperative societies is probably representative of the entire trucking industry. Although their personnel and number of trucks were about the same in 1942 as in 1938, their income had increased by 140 percent. With the complete cessation of imports of trucks, a rise in traffic placed the shipper at the mercy of the truck owners both as to service and rates. To improve service and to exert a downward pressure on the rates, the Government, itself now a large shipper of goods, organized in November 1942 a pool of trucks to be operated by Steele Brothers as the exclusive agent of the Government and with first claim to the limited imports of new vehicles, tires, and spare parts. In 1944, of the total number of 2,838 heavy commercial trucks, 624 were operated by Steele Brothers. In the spring of 1945 the trucking emergency was declared at an end, the pool dissolved, and the trucks offered for sale to the private truckers.

The formation of a Government motor-transport agency had at least one salubrious effect on the Jewish sector of the industry: it forced the private truck owners to coordinate their efforts and discipline profiteering individuals. To this end a central traffic bureau known as TAAN (the Hebrew word for "load") was formed in January 1943 with the sponsorship and financial support of the Histadruth. Its directorate was equally representative of the trucking interests of the collective settlements, the cooperative societies, and the individual operators. This central office received orders for freight transportation which were allocated to its members in such a way as to maximize carrying loads in both directions and reduce cross hauling. Since its members operated about 1,000 trucks, employing 1,800 persons, and carried about 95 percent of all road freight shipped privately, it was able to curb profiteering. Despite these efforts, rates had increased two-and-a-half times over those in force during peacetime. Some idea of the magnitude of the postwar adjustment required is suggested by the fact that railway freight rates had increased by only 50 percent.

TAAN was also helpful in the distribution of spare parts. Some such organization as this together with appropriate governmental regulation, may well serve as the basis for the necessary consolidation of the industry.

Palestine's road transport, both passenger and freight, has been costly to maintain even in peacetime because of the complete absence of standardization. A Government census of motor vehicles in 1944 disclosed the total of 10,677 motor vehicles comprised of several hundred different makes; there were 49 makes represented by at least 30 motor vehicles. In the commercial field the choice of vehicle most often was determined less by its specialized efficiency for a given purpose than by the terms of credit.

Perhaps of greater importance is the war's legacy of worn-out equipment. For example, two-thirds of all the buses owned by the 11 passenger cooperatives were manufactured prior to 1936 and as many as four-fifths prior to 1939. The trucks were only slightly less antiquated, with half produced before 1936 but with nearly four-fifths manufactured prior to World War II. In view of their age, intensive utilization during wartime, and under-maintenance due to scarcity of parts, a very substantial fraction of all vehicles will need replacement as soon as replacements are again available. It is questionable whether the accumulated reserves are adequate for replacement purchase since the cooperative societies are under constant pressure to distribute surpluses. However, their vastly improved financial condition, compared with prewar years, should enable them to raise their capital funds on reasonable terms.

Air Transportation

In a country as small as Palestine, air transportation is primarily oriented toward travel abroad. There was sufficient traffic of this character prior to the war to induce five international air services, representing as many countries (Great Britain, Egypt, Holland, Poland and Italy), to maintain regular service between Palestine and Europe, Africa, Asia and Australia. In addition there was one local company, Jewish-owned, that operated a regular service between Tel Aviv, Haifa and Beirut before the war. This company was obliged to suspend operations when its planes were appropriated by the British authorities. Indeed, all civil aviation virtually came to a standstill during the war years. While the facilities were available, however, the Palestinian business community suffered no disadvantage compared with its neighbors in the speed of its contacts with the West or East. This was also true with respect to international cable and telephonic communications, since Palestine has had direct access to the systems of the world.

Telephone Services

By Middle East standards, the Palestinian telephone service, which is owned and operated by the Government, must be regarded as efficient and having good coverage. In 1939 there was one phone for every 81 persons in Palestine, compared with 248 in Transjordan, 261 in Egypt, and 381 in Syria and Lebanon.* Compared with United States standards, where there is one phone for every 6 persons, the Palestinian system must be regarded as inefficient; it is difficult for a traveller from the U. S. to reconcile himself to the fact that in Palestine it takes several hours to make an "urgent" call to a point 60 miles away—after paying a special high charge for such urgency!

TRADE

Lack of systematic data on wholesale and retail trades is a grave handicap to practical marketing research in Palestine. Trade institutions vary from the most backward to the most modern. Trade is still evolving from less articulated and more primitive forms, such as direct marketing by producers through stands, donkey-packs, peddlers' carts, and stalls in municipal markets, to differentiated wholesale and retail outlets. Some idea of the character of the Jewish branch of wholesale and retail trade is provided by the Jewish Agency's Census of Trade.

Wholesale Trade

The wholesale trade embraces those firms engaged in foreign trade, whether as wholesalers proper, commission merchants or shippers of citrus fruit. Unfortunately the data make no systematic distinction between those engaged primarily in imports and exports and those concerned with the wholesaling of locally produced goods within Palestine. For this reason, an important characteristic of Palestine's wholesale trade drops out of sight: it is primarily concerned with foreign trade and, outside of the citrus trade, the wholesalers can be identified principally as importers.

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* Population figures refer to the settled population.

The wholesalers' preoccupation with foreign trade forced many local manufacturers into the distribution of their own products, presumably at some loss of efficiency to both the manufacturing process and the distributive process. Thus a special survey of the distribution methods of 179 manufacturers made in 1936, revealed that no fixed methods of distribution existed. Out of the 179 manufacturers, only 15 sold exclusively through wholesalers, while many manufacturers served wholesalers, retailers, and consumers indiscriminately. As a result of this system, or the lack of it, the manufacturer has been handicapped by having to bear credit risks and has been burdened by the necessity of maintaining stocks for retailers and consumers.

The available statistics also fail to disclose that the non-Jews have played a more important role in wholesale trade than elsewhere. This dependence upon the Arab wholesaler, who in some lines of import trade was the chief supplier, created additional difficulties during the boycott initiated in 1936. As a result Jewish merchants attempted to become independent of the Arab trader.

Within these limitations of the statistical data, the figures in the table on the next page set forth the salient characteristics of Jewish wholesale trade prior to the war.

More than half the establishments distributed food products, with textiles and apparel ranking next. Average capital investment and sales were highest for general merchandise, fuel and building materials. More than half the wholesale distributors were located in Tel Aviv, with Haifa and Jerusalem claiming most of the remainder. Twenty-two percent of the personnel in wholesale distribution were owners and 6 percent were relatives, as compared with retail trade where 44 percent of the personnel were owners and 24 percent were relatives.

To the above enumeration must be added the 555 retail stores that also engaged in wholesale business. These combination establishments existed in all the commodity categories, but were relatively more numerous among stores dealing in building materials and automotive supplies and fuel. In 1936 they accounted for about one-sixth of the wholesale transactions.

As in other branches of the Jewish economy, cooperative societies must also be reckoned with in the field of wholesale distribution, both as buyers and as sellers. Among the largest cooperative organizations are those affiliated with the Histadruth; more specifically, Hamashbir Hamerkazi and the Tnuva societies.

Traditionally, cooperative purchase societies have developed only as the consumer cooperative societies have developed. In Jewish Palestine the order has been reversed. The growth of the consumers' cooperatives has been both belated and arrested; while the wholesale society, Hamashbir Hamerkazi (meaning central supplier), has flourished since its organization in its present form in December 1930. Instead of depending on the patronage of final consumers organized cooperatively, its clients have been principally the cooperative and collective producers' societies, more particularly the agricultural settlements. The following table shows for 1944 the relative importance of the various consumer groups constituting its clientele:

JEWISH WHOLESALE TRADE IN PALESTINE, 1937

		Average per store			*Percent of total sales*
	Stores	*Personnel*	*Sales in 1936*	*Capital*	
			(Thousands of £P)		
A. Wholesale distribution	423	5.6	15.8	4.9	100
General merchandise	11	10.7	48.6	18.0	8.0
Food	218	4.9	16.4	3.9	53.5
Textiles and apparel	70	3.5	7.7	4.2	8.0
Bldg. materials and machinery	36	5.1	16.5	8.6	8.9
Fuel	24	18.0	44.8	8.9	16.1
Paper and printing	15	4.5	6.3	5.3	1.4
Miscellaneous	49	5.3	5.4	2.9	4.0
B. Agencies	96	3.4	17.5	1.6	
C. Citrus fruit trade	18	17.7	[a]	45.4	

Source: Adapted from *Jewish Census of Commerce*, 1937, p. 92.

[a] The census value figure on the Jewish citrus trade is in error, since it is as large as citrus exports for the entire country in 1936. Actually the Jewish citrus trade in 1936 accounted for only 60 percent of total citrus exports. See Gurevich and Gerz, *Jewish Agricultural Settlement in Palestine*, Jerusalem, 1938, p. 84.

DISTRIBUTION OF SALES BY HAMASHBIR HAMERKAZI

Hamashbir supplies a large variety of goods to its customer-members, ranging from foodstuffs, clothing, and building materials to agricultural machinery, at an increase of only 7 to 8 percent on the cost of goods. It provides engineering advice for the purchase of equipment and a field staff for the maintenance and repair of machinery. Through its industry department, Hamashbir Hamerkazi operates certain factories on its own account, such as its flour mill, or jointly with the collective settlements, such as the shoe factory at Givat Hashlosha. This department serves also as a marketing agent for the non-agricultural production of the various cooperative societies.

HAMASHBIR CONSUMER GROUPS

	Percent of total sales in 1944
Collective agricultural settlements	48.5
Consumers' cooperative societies	33.2
Agricultural producers' cooperatives and smallholders villages	5.5
Cooperative restaurants and institutions	4.2
Agricultural training farms, agricultural schools and experiment stations	2.6
Other miscellaneous enterprises and cooperative societies	6.0
TOTAL	100.0

Source: Special memorandum supplied by the General Manager.

The development of the organization may be appraised from the following few figures, subject to allowance for the sharp price rise in 1944.

GROWTH OF HAMASHBIR

	1931	*1939*	*1944*
Sales	£P 68,146	£P 543,062	£P 2,800,000
Paid-up capital	6,000	82,606	360,000
Dividends paid to members	977	7,509	40,000

Source: Special memorandum supplied by the General Manager.

The Tnuva Ltd. (meaning produce) engages in both wholesale and retail trade, although it may be regarded primarily as a wholesaler. This organization, established in 1926, takes over the products of agricultural settlements and sells them direct to consumers through its own retail outlets, or indirectly through consumers' cooperatives or through privately owned retail stores. At the present time Tnuva operates 100 retail food stores under its own name. These stores handle Tnuva products and others, but the central organization retains the right of supervision. It also supervises about 250 house-to-house distributors of milk. Tnuva has no control or supervision over its produce distributed through regular commercial channels. In addition to its marketing functions it operates several dairies and cheese factories, which have handled about half of all Jewish milk production. The volume of its sales indicates its development, although here again care must be exercised in allowing for the price rise in the war years:

Since Tnuva is a Histadruth institution, it has to achieve a delicate balance between opposing pressures. It must strive to obtain reasonable prices for its suppliers, who belong to the Histadruth, and at the same time set fair prices for its consumers, most of whom are also members of the Histadruth.

To facilitate the export of agricultural produce of Histadruth farm affiliates, Tnuva Export, Ltd. was established in 1937. To date, its export activities have been restricted almost exclusively to the citrus crop; in the last prewar crop year it handled one-eighth of total Jewish citrus exports.

DEVELOPMENT OF TNUVA LTD.

Year	*Tnuva's sales*
1931	£P 141,856
1937	556,216
1939	579,848
1942	2,000,000

Not all cooperative marketing associations are affiliated with the Histadruth. In mixed farming, among the more important unaffiliated organizations are Tenne, the marketing and purchasing cooperative of the independent smallholders, and Amir, formed by the more substantial farmers organized in the General Federation of Farmers. While the volume of business of these unaffiliated societies has not been of the same magnitude at Tnuva, it has nonetheless been considerable.

In the marketing of citrus there are some large cooperatives also unaffiliated with the Histadruth. In 1938-39 about 7 million cases, or 70 per cent of all Jewish citrus exports were handled by cooperative marketing associations. Of the 7 million cases, 1.8 million were exported by Tnuva Export, Ltd. and Yakhin Cooperative Association, Ltd., both affiliated with the Histadruth. Among the Arab citrus growers, there were no cooperative marketing associations prior to the war. The Jewish cooperative associations also served as guarantor of bank advances to their members. During the war the Government became the guarantor of the advances and sole shipper of citrus fruit. Allocation of wartime shipments among individual groves, however, was accomplished by the organization of 12 Jewish and 12 Arab contractors, who represented about 90 per cent of citrus acreage. The Jewish growers used their cooperative associations as contractors. Whether the cooperative associations will be able to resume their more complete marketing functions remains to be seen.

Due to the various cooperative marketing associations, the produce of Jewish agriculture, at the wholesale level at least, may be said to be marketed in an orderly manner.

One other special marketing organization deserves mention; namely, the Foreign Trade Institute. The previous discussion of manufactures has emphasized the necessity of enlarging markets through exports and the fact that manufactures have been characterized by a multiplicity of small enterprises. Typically these businesses were too small to maintain export departments; they were handicapped by language barriers, lack of commercial intelligence, and by ignorance of packing methods, shipping rates and schedules. To help the small industrialist surmount these difficulties, the Manufacturers' Association, Anglo-Palestine Bank, the Palestine Industrial Bank, and the Jewish Agency joined resources in 1937 to organize the Foreign Trade Institute. The latter has maintained commercial agents in the more important cities of the Middle East, placed orders, advised on packing, and handled financing, shipping, and insurance arrangements. Its commission charge was less than that of private commission agents. It also renders a service by attempting to enforce quality standards on export merchandise. Its promotional activities include permanent and traveling exhibits and detailed trade catalogues and directories. During the war the volume of orders placed by the Institute nearly doubled each year, from £P 65,000 in 1940 to £P 833,000 in 1944. In the latter year the exports effected by the Institute represented about one-quarter of all manufactures exported, excluding polished diamonds, Dead Sea chemicals, and petroleum products. Nearly half of these orders were shipped to Egypt and more than 90 percent were placed within the Middle East.

Wartime developments have exerted pressure upon wholesalers to concern themselves more with local manufacturers. The shortage of goods on the international markets, the rigorous governmental control over imports and exports, and the use of government corporations as exclusive buying and sellings agents all served to restrict greatly the scope of wholesalers formerly engaged in foreign trade. Some of these enterprises began to distribute locally manufactured goods in the domestic market. It is still too early to judge whether this improvement in internal distribution will remain when international trade is resumed.

Retail Trade

All available information suggests that there has been an uneconomic concentration of employment in retail trade. The 1937 census of Jewish retail trade covered booths and stalls as well as retail stores. The distribution by size of firm indicates that 3,817 small stores constituted 54 percent of the total of 7,103, but were responsible for only 12.4 percent of the sales. Of all the stores, as many as two-thirds operated without any hired personnel; in more than one-quarter the single proprietor constituted the entire personnel. The annual sales of 48 percent of the small stores were less than £P 500 per annum, or about £P 2 per day. That small stores were most numerous in the food group is indicated by an average capital investment of only £P 202. The relatively large numbers of these small unprofitable retail establishments indicate that considerable amount of "concealed unemployment" existed in Jewish Palestine in 1937.

JEWISH RETAIL TRADE IN PALESTINE, 1937

		Average per store			*Percent of total sales*
	Stores	*Personnel*	*Sales in 1936*	*Capital*	
TOTAL	7,103	2.5	£P 1,585	£P 801	100.0
General merchandise	290	3.3	3,516	1,781	9.1
Food	3,344	2.0	1,035	202	30.7
Eating places	1,002	3.4	926	240	8.2
Textiles and apparel	955	2.3	1,430	1,029	12.1
Furniture and household furnishings	402	2.5	1,694	1,156	6.1
Building materials	351	4.1	7,093	5,736	22.1
Automotive and fuel	172	2.4	3,778	2,097	5.8
Book and stationery	246	2.3	1,006	767	2.2
Miscellaneous	341	2.4	1,221	738	3.7

Source: Derived from *Jewish Census of Commerce*, 1937, pp. 67-68.

Excessive concentration in trading, and especially in the retail food trade, is characteristic also of many Western countries. Palestinian retail trade, however, seems to have carried the overcrowding to the extreme. Where there were, for example, 79 persons in 1939 to every retail store in Jacksonville, Florida, a city about the size of Tel Aviv, in Tel Aviv there were only 38 persons per retail store. Where there were on the average 5.3 persons gainfully occupied per store in Jacksonville, in Tel Aviv there were only 2.6. In Palestine the concentration in trading might have resulted partly from inertia on the part of immigrants, many of whom were petty traders in their country of origin, and partly because the entrance capital required is so small, making it the path of least resistance. More than half the Jewish retail stores in existence in 1936 were first established during the period 1933-36, when the greatest wave of immigration into Palestine occurred.

As the table indicates, almost half of the Jewish retail stores in 1936 were in the food group, which accounted for almost a third of the sales. Since the non-Jewish economy in Palestine has on the average a lower standard of living than the Jewish, it can be assumed that for the whole country the food trade constitutes an even larger share of retail trade.

Extension of credit is so widely practiced in retail trade that the Jewish census report considered credit advances of less than a month's duration as a cash payment. The same source indicated that 40 percent of total retail turnover was sold by extension of credit for one month or more. Establishments selling groceries, furniture, and building materials tended to grant more credit than other types of stores.

Even during a year of riots some Jewish-owned stores had some Arab patronage. Based on sales experience in 1936, about 25 percent of the more than 5,000 retail stores reporting had mixed clientele. In the cities of mixed populations such as Haifa and Jerusalem, the percentages were 43 and 39, respectively, compared with 15 in Tel Aviv. Clothing, building materials, machinery, and automobiles were the chief articles sold to the Arab trade.

Contrary to expectations, consumer cooperatives have played a very minor role in retail trade. According to the census reports (which apparently used a very loose definition of cooperatives, to include Tnuva retail outlets) consumer cooperative stores accounted for only 2 percent of all retail establishments and for 6.5 percent of all sales. Even this is somewhat misleading, since about half of all sales by consumers' cooperatives in 1937 were attributable to the societies in the smallholders' settlements which out of principle prohibit private trading. In the areas where they had to compete with private retailers, they scarcely made an impression. There are two principal reasons for this backwardness; the fact that the grocery trade has been predominantly a family affair, with both unlimited working hours and a low standard of living, has meant much lower operating costs than the consumers' cooperative societies could achieve. This was not offset by the ability of cooperatives to purchase more cheaply. Moreover, the private retailer advances his customers much more liberal credit than the cooperatives could afford to offer or by principle would be allowed to offer.

With wartime inflation of prices and deterioration of quality, the benefits of consumers' cooperative societies became more meaningful to the Jewish community in general and to the urban population in particular. Their wartime growth is reflected in the table on the top of the next page.

Whether this growth can be maintained or extended with the return of normal trading remains to be seen. All that can be said with certainty at the moment is that the cooperative movement, at both the retail and wholesale levels, is in a much stronger financial condition at the war's end than it was in 1939.

CONSUMER COOPERATIVE RETAIL OUTLETS

End of year	*Number of stores*	*Number of members and dependents*	*Personnel*	*Sales (thousands of £P)*
1937	82	18,289	251	359.1
1939	101	30,056	268	341.0
1941	111	46,446	327	500.3
1943	169	74,329	607	1,922.2

Source: 1943 Annual Report of Hamashbir Hamerkazi, p. 114.

Other figures from this report show that the largest gains had been achieved in the urban areas.

SHIFTS IN COOPERATIVE OUTLETS

	Percent distribution			
	Number of societies		*Value of sales*	
	1937	*1943*	*1937*	*1943*
Smallholders' settlements on National Fund Land	48	22	48	27
Independent smallholders' villages	28	27	21	27
Cities and suburbs	24	51	31	46
TOTAL	100	100	100	100

Among the shortcomings of the distributive channels is the tendency to organize fractional markets. The most serious, of course, is the division between the Jewish and Arab communities. Although during the war years some of the large manufacturers made special efforts to distribute their products to Arab communities, the merchant class itself has not yet learned the necessity of using different techniques for different markets. But even within the Jewish community, various political and religious groups have attempted on occasion to limit purchases to commodities produced or sold by their own members. This attitude only serves to aggravate the problem of broadening markets.

To remedy other deficiencies calls for governmental action on both the local and national levels. There is a crying need for the initiation and enforcement of regulations concerning food inspection and grading, food and drug control, weights and measures inspection, prosecution for fraud and adulteration, and "fair trade" practices.

The major problem of well-articulated functions has been virtually untouched by wartime developments. One Palestinian investigator writing close upon V-E Day concludes:

> There exist no clear-cut divisions between importer, exporter, wholesaler, retailer, agents, jobbers, brokers and salesmen. The retailer imports, the wholesaler exports and the exporter varies his occupation when import is the fashion

of the day. The manufacturer confines the distribution of his lines to a so-called wholesaler, whose main interest is frequently the sale of competitive foreign articles or to a retailer who takes pride in promoting imported articles which he alone can sell in his street or town. Investigation shows that in many cases the profit margin local industry allows the distribution trades is too small and they have at least before the war been forced to seek profits elsewhere. Last but not least comes the character of the product itself. Many foreign producers used market research, customer-oriented design and advertising to create customer demand, and many of Palestine's manufacturers neglected these activities and brought products to the market which had less sales appeal.

PROFESSIONAL AND PERSONAL SERVICES

Information on the service occupations is even more inadequate than the information on the trades. Yet the segment of the economy under review is not unimportant. In all of Palestine, the professional services and the personal services of hotels, restaurants and domestics in 1939 employed 52,300 persons (7.1 percent of total employment) and produced 10.3 percent of total national income. By 1942 employment in this group had increased to 61,550, or 7.5 percent of total employment, and the share of national income was 6.8 percent.

In the Jewish community these occupations were even more important. Thus in 1939 the Jewish agency estimates that nearly 18 percent of the Jewish labor force was engaged in the liberal professions and in domestic and personal services. This reflects not only the higher standard of living of the Jews as compared with the Arabs but also the overcrowding of these occupations by immigrants who had formerly engaged in these professions or occupations in their country of emigration. The latter observation is supported by the fact that during the war years, when full employment was achieved, the number engaged in these two categories declined by 15 percent and represented only 14 percent of the total labor force. This points to an obvious consideration that the extent to which the traditional occupational structure of Jews can be altered depends on the number and character of the jobs available outside of the traditional occupations.

CHAPTER 18

LABOR ORGANIZATION AND ENTERPRISE

EARLY BEGINNINGS

In some important respects, the institutional framework of Palestine's economic development, particularly that of the Jewish community, has been unique. To our knowledge, Jewish Palestine provides a singular example of a labor organization assuming a primary role in a colonizing effort.

The origin of this workers' movement can be traced to the character of the Jewish immigrants to Palestine at the turn of the present century (the second "Aliyah") and the economic conditions with which they were confronted. This wave of immigration had its inception in the pogroms of Kishenev and Gomel in 1903 and in the collapse of the Russian Revolution of 1905. The failure to achieve social democratic reforms in Eastern Europe created a feeling of frustration among the Jewish youth and fostered the conviction that pogroms would remain the order of the day. Under the circumstances there were several tens of thousands ready to strike new roots in the old-new land of Palestine, especially the members of the "Poale Zion" (Labor Zionist) groups, who risked their lives in the Jewish self-defense during the Gomel pogrom. This party, which is an international organization, regards a socialist Palestine as the radical solution of the Jewish problem.

By virtue of their socialist ideology, the Labor Zionists have been opposed to "exploitation" of labor and committed to the idea of self-labor. This attitude was developed into a creed by A. D. Gordon, who in 1906 founded in Palestine another labor organization, Hapoel Hatzair (Young Workers) which places more emphasis on Zionism and rejects certain socialist principles that seem contrary to the Zionist objective. The "religion of labor" not only conforms to socialist concept of non-exploitation but is also uniquely suited to the needs of those Jews from the Diaspora who are attempting to reconstitute their National Home. For, according to Gordon:

> A people which has been completely cut off from nature and, for a thousand years confined within the walls of the ghetto, a people that has become

> accustomed to every mode of life save the natural one—the life of self-conscious and self-supporting labor—such a people will never become a living, natural, laboring people unless it strains every fibre of its will power to attain this goal. Labor is not merely the factor which establishes man's contact with the land and his claim to the land; it is also the principal force in the building of a national civilization.
>
> We have to make labor the center of all our endeavor, the foundation on which our whole undertaking is based. Only when we raise labor as such to the height of an ideal . . . shall we be healed of the disease with which we have been stricken, and be able to bridge the gulf which divides us from nature. Labor is a great human ideal of the future, and a great ideal is like the healing sun. We need fanatics of labor, in the most exalted sense of the word.

Imbued with the ideals, zeal and fervor propounded by Gordon, the labor immigrants were met by a completely hostile attitude on the part of the Jewish community already settled in the agricultural colonies. Not only did the workers find little scope for the practice of their ideals, it was difficult even to subsist. Most of the colonists, who were financed by the philanthropies of Baron Edmond de Rothschild, preferred to employ cheap Arab labor. This practice violated the spirit of Zionism by reducing the capacity of the land to absorb Jews and it violated the spirit of socialism by creating a landlord class.

The realties and dangers of the situation were described by Achad Ha-am, the pen name of Asher Ginsberg, one of the leading Zionist essayists in the pre-war period. On his third visit to Palestine in 1912 he attempted to summarize the results of the colonization efforts of the preceding thirty years:

> A Jew can be a diligent farmer and a country landlord like Boaz in his day, living by agriculture and being deeply concerned with it. Every morning he can go out to his field or vineyard, look after his workers who plough and sow on his land, plant and graft his vines, nor hesitate to work with his workers when he finds it necessary to do so. But of what use is all this for the establishment of a safe refuge? A "superior" class of such "gentlemen-farmers" dependent upon the work of others cannot serve as the foundation of such a structure. The basis of any state is the rural masses—the workers and the poor farmers who live by cultivating the fields whether it is their own small lot or the large tracts of the "superior" class. The rural masses of Eretz Israel are not our own at present. . . . It is well known that at present the work in the settlements is done mostly by the Arabs of the neighboring villages.
>
> It is possible to establish in the settlements a superior class of "landlords" whose work will be done by others, and it is even possible to establish a small group of workers to do the more skilled work, which is easier and better paid. But it is impossible to create the country-masses—the actual masses—to do the simple hand work that offers little but is the only source of livelihood for the country-masses numbering thousands and tens of thousands of people.

> One hope, however, is left for us—those young workers who come ready to give their life for the national ideal, to acquire positions of work and to create in our existing settlements of the future those Jewish working country-masses which are not there as yet. Not for nothing do we find lately that the problem of the workers is practically the central problem of the Jewish community. All feel that it is not merely a workers' problem, but also a problem concerned with the aims of Zionism as a whole. If the workers do not succeed in solving this problem it will be a sign that the national ideal is incapable of creating those inner powers so necessary for our cause. We shall have to make peace with the idea, then, that our country-population in Eretz Israel, no matter how much it increases, will forever remain a "superior" cultural minority whose power will lie in its brain and capital, and with the idea that the large country-masses whose strength lies in the work of their hands will not be our own even then. And this would completely change the nature and aims of Zionism . . .

The one hope foreseen by Achad Ha-am, the "fanatics of labor," was in fact the primary force that redeemed the Zionist ideal.

In the light of the prevailing conditions and the burning desires of the labor Zionists, it is not surprising that the first trade union in Palestine, indeed in the entire Middle East, was organized by agricultural workers, more particularly the workers on the citrus plantations. This Agricultural Workers Federation was organized in 1911 to serve the Judean district. There soon followed a similar Federation of Agricultural Workers in the Galilee district. In most countries even after the principles of trade unionism have been long accepted the agricultural workers remain unorganized. Usually they are dispersed on single farms far removed from one another and lack any tradition of trade unionism and organizing ability. Both difficulties were absent in Jewish Palestine. Hence, the unique circumstance of agricultural workers forming the vanguard of the trade union movement.

Even these small beginnings were not conceived along traditional trade union principles of job protection and wage increases. At the second conference of the Federation the decision was taken to form a workers' Sick Fund and a resolution was accepted to initiate intensive educational and cultural activities. At about the same time there were organized the first workers' cooperative groups for working on plantations under contract with their own management.

The decisions of the succeeding conference were still more important in determining the fate of organized workers. Although the first experiments in collective agricultural settlement were executed without the participation of the Federations, they soon realized that such settlement could be made into an effective colonization instrument which does not involve the exploitation of hired labor. Accordingly the third conference resolved to participate in such colonizing activities. The same conference also agreed that there should be a general trade union to include all the workers of the country; the executive committee of the Agricultural Workers' Federation was instructed to act in accordance with this resolution.

Fulfillment of the idea was deferred first by World War I and afterwards by doctrinal political differences among several of the labor parties. In November 1920 the forces of unity prevailed, and the first convention of the Histadruth Ha'Ovdim (General Federation of Jewish Labor) was held. It was decided that the Histadruth should be an organization that would be placed above the political controversies of the various political factions; it would operate in the fields of economic betterment, colonization and culture, where no sharp divergencies existed among the political groups composing the Histadruth.

That the Histadruth bears the ideological impress of the Agricultural Workers' Federations, which had been the prime movers, is clearly indicated by the statement of the program adopted by the first convention:

> In the first instance the Histadruth considers it its duty to create a new type of Jewish worker, and to see to it that while colonization is developing, the Jewish worker who came into being as a result of this very colonizing process, shall be assured the place he deserves. The Histadruth includes all toilers who live by their own labor without exploiting others; it regulates all matters concerning the working class in the fields of trade union activities, colonization and education, with the aim of building a Jewish Workers' Community in Palestine.

From the outset this statement of policy has been taken seriously. Its commitments in all three directions—trade unionism, colonization and education—have been pursued so energetically and intelligently that the organization has become the most important institutional factor in the upbuilding of Palestine. Indeed, the coverage of its membership alone would entitle it to this distinction.

MEMBERSHIP AND STRUCTURE

Ever since 1930 the members of the Histadruth, excluding workers' wives, have accounted for about three-fourths of all Jewish workers, as the word "worker" is defined by the Histadruth.* An estimated 15 per cent of the Jewish working class were organized into unions separated from the Histadruth on political or religious grounds. This 15 percent were in the Federation of National Workers (Revisionist); Mizrachi Workers (Orthodox), Agudath Israel (ultra-Orthodox), and other unions. The remaining 10 to 11 per cent of Jewish workers, who were unorganized, were largely Yemenite and Sephardic Jews with the lowest standard of living among Jewish workers and previously unexposed to trade unionism.

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* Presumably the total of Jewish "workers" is a measure of the total number of persons eligible for membership in the Histadruth. The principal qualification is an ideological belief in the non-exploitation of labor.

HISTADRUTH MEMBERSHIP BY CLASS OF MEMBERSHIP AND AS PERCENT OF TOTAL JEWISH WORKING CLASS, SELECTED YEARS 1920-44

Year	*Total number of Histadruth members*	*Number of workers' wives included in membership*	*Number of working youths under 18 included in membership*	*Histadruth members, excluding workers' wives, as percent of all Jewish workers*
1920	4,400			
1925	10,085	1,085		52.9
1930	25,400	5,200		74.0
1935	67,000	15,000	6,000 [a]	74.3
1940	117,000	28,000	7,270	74.2
1943	133,000	33,600	7,845	72.3
1944	142,000	40,000		

Source: Histadruth, *Statistical Abstract* (Sicumim) *1943*, pp. 1, 11 and 24. Figures for 1944 from special memorandum prepared by W. Preuss, Chief Statistician for Histadruth. [a] End of 1936.

In June 1942 the number of gainfully occupied Jews, excluding those in the military service, amounted to 212,800. Histadruth membership (excluding workers' wives) in that year numbered 95,600, or 45 per cent of the total gainfully occupied population. Histadruth members and their families in 1944, according to one estimate, represented 38 percent of the total Jewish population. It is this prominence in the community that has enabled the Histadruth to dominate the Vaad Leumi (the domestic Jewish National Council of Palestine) and to hold the key positions in the Jewish Agency (the representative of the international Jewish interest in Palestine).

These measures of the ratio of Histadruth members to total Jewish gainful employment suggest, however, that while the Histadruth deserves pride of place, it would be a grave mistake to claim that activities of the Histadruth were coincident with the activities of all Jewish Palestine. The middle class and capitalists, whether unorganized or grouped into such organizations as the Jewish Farmers Federation and Manufacturers Association, have also played an active and important role in the reconstruction of Palestine. However, to the extent to which Palestine's development has taken on unique features, the Histadruth has been largely responsible.

It would be equally erroneous to regard the Histadruth as a monolithic structure. On the contrary, it abounds in parties and doctrines. Since all factions, however, are Zionist and believe in creating a workers' community, division is never carried to the point of paralysis.

The very occupational structure of the Histadruth membership reveals something of its unconventional character. Thus in 1943 nearly one-quarter of its adult working members were agriculturists but only 8 percent of 23,800 agriculturists were hired workers. The remainder either were self-employed on their own farms or were members of collective or cooperative agricultural settlements.* More than 85 percent of all agriculturists eligible for membership were enrolled in the Histadruth.

DISTRIBUTION OF HISTADRUTH MEMBERSHIP BY INDUSTRY OR OCCUPATION, 1943

Industry or occupation	*Number of workers*		*Histadruth members as percent of total employed*	*Percent of total Histadruth membership*
	Employed	*Members of Histadruth* [a]		
Members of agricultural labor settlements	23,500	21,000	89.4	22.8
Hired agricultural laborers	3,000	2,000	66.7	2.2
Self-employed farmers on privately owned farms	1,000	800	80.0	0.9
Industry and handicrafts	34,000	24,000	70.6	26.1
Construction and public works	14,500	8,700	60.0	9.4
Transport and communication	7,800	5,200	66.7	5.6
Clerical employees	15,000	8,000	53.4	8.7
Teaching, medicine and liberal professions	8,000	4,100	51.2	4.4
Services	12,200	6,450	52.9	7.0
Security, excluding military service	17,000	11,900	70.0	12.9
TOTAL	136,000	92,150	67.8	100.0

Source: Histadruth, *op. cit.*, pp. 12-14. Number employed as of Jan. 1, 1943 and membership as of the end of the year. [a] Excludes workers' wives and youths under 18 years of age.

Also unusual is the fact that one-fifth of the membership is composed of persons in clerical, professional and service trade occupations. Even in these "white collar" occupations, half of those eligible are members. In no industry are less than half of the workers organized. This record is unsurpassed even in Soviet Russia.

The Histadruth's form of organization also departs from the more conventional forms. There are three industrial unions—in agriculture, among clerical workers and among railway and postal workers—and a host of craft unions. Authority, however, rests with the local Labor Councils which have been established in every city and large village. The approval of the Labor Council must be secured before a strike can be called by an individual craft or industrial union. The Labor Council also represents the unions in making collective agreements. Neither craft nor industrial lines are followed in representation in the local Labor Councils or in the General Conference (convention) of the Histadruth. Delegates are chosen by the individual voters from lists offered by political parties, and voting is influenced by political views rather than by a desire for craft or industrial representation. The main parties are Mapai (Zionist Socialist party, now split into two factions) which held 300 out of 424 seats in the 1942 convention; Hashomer Hatzair (Nationalist Marxist party) which held 83 seats; and Left Poale Zion (more Marxist than nationalist) which held 19 seats.

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* Presumably in years of prosperity in the citrus groves the number of hired workers would be much larger.

TRADE UNION ACTIVITIES

The protection of the Jewish worker on the job has been one of the three principal branches of Histadruth activity. Even in this domain of traditional trade unionism the special circumstances of the Palestinian scene has left its imprint. In view of the much lower standard of living of the Arab population, job protection started by insulating the Jewish worker against this type of competition. This could be assured only by stipulating that Jewish-owned enterprises must employ Jewish workers exclusively. Only such a stipulation could obviate the repetition of the experience of the agricultural workers prior to World War I.

This attitude conforms both to Zionist needs and socialist beliefs. As socialists, Jewish workers are opposed to the idea of Jews constituting themselves a master class exploiting native labor. Dr. Chaim Weizmann has defended this policy in the following manner:

> If we do not employ Arab labour it is thrown in our faces you come into the country and you do not employ the labour of the country which is already there, and if we employ Arab labour we . . . lay ourselves open to the reproach . . . here they are, they come and live here, and the real work is begin done by others and they are simply overlords. We must do the work of our own upbuilding.

As Zionists they feel compelled to pursue a policy that will lead to the maximum absorption of Jews into the Palestinian economy. Otherwise they cannot hope to constitute a majority in their own homeland. Without such a majority Jewish Palestine would be only another typical Jewish community in a non-Jewish country. Thus, not enmity to the Arab workers but self-preservation necessitates this policy.

In the main, except for seasonal employment in the citrus groves and a few enterprises based on Government concessions, the policy of exclusive employment of Jewish workers has prevailed. It has no doubt increased the absorption of Jews in Palestine in the short run but it has also been a very important factor in maintaining the barrier between the Arab and Jewish peoples. Jewish labor proposes to continue to maintain this barrier at least until the Arab sectors of the economy have developed to the point where Arabs work only for approximately the same wage as Jews.

Protective Government labor legislation, aside from temporary measures for wartime control or manpower, has been confined to certain restrictions on the employment of women and children, several safety measures, and a limited workmen's compensation law. In lieu of a well-developed program of labor legislation, the Histadruth has attempted to protect labor through collective agreements. Collective agreements have been restricted chiefly to manufactures and construction. Outside of citriculture, agriculturalist members of the Histadruth were so predominantly self-employed as to allow little room for collective bargaining.

In the spring of 1943 the Histadruth made a survey of 322 factories employing 22,900 workers with minimum employment per factory of 15. In this sample, 29 percent of the workers were not covered by a labor agreement and an additional 24 percent were protected only by oral agreement. The working conditions usually regulated by a formal agreement are the following: (1) labor recruitment; (2) wage rates and pay; (3) employment of juvenile workers; (4) working hours; (5) legal holidays; (6) annual leave; (7) sick leave and maternity leave; (8) compensation in case of accident (in addition to that prescribed by law) ; (9) period of notice; (10) dismissal; (11) compensation for loss of employment; and (12) voluntary arbitration in case of labor disputes.

Of primary importance in the maintenance of labor standards is the recruitment of labor through the labor exchanges. Originally these were organized and operated by the Histadruth, but in recent years the minor unions have participated in their management under the general supervision of the Jewish Agency. Neither employers nor Government is represented. Obviously the exchanges will not refer workers to substandard jobs. Fifty-five percent of the firms canvassed in 1943, and employing half of all workers, had agreed to recruit only Histadruth workers. About one-quarter of the establishments, employing 19 percent of the workers, had no agreement. The remainder, accounting for 30 percent of the labor force, agreed to employ Histadruth members while reserving the right to employ a stipulated percentage of workers from the minor unions or from the unorganized. The exchanges are used to enforce a share-the-work policy in times of depression and to guarantee seniority rights. The employers and Government believe that an instrument of such economic power should be vested with the Government.

Histadruth contracts provide uniformly for an eight-hour day, and they generally provide for an annual vacation with pay, consultation with the union on discharges, accident insurance and a technique of arbitration.

Provision is also commonly made for an employer contribution to Kupat Holim, the Histadruth's Sick Fund, which constitutes the largest medical service in Palestine. The "standard" rate of contribution is 3 percent of payrolls, but many employers are allowed to contribute less. A special survey in the summer of 1944 disclosed that 158 employers out of the 162 canvassed were contributing to Kupat Holim.

Collective bargaining on an industry-wide scale has been uncommon in Palestine because of the absence of industry-wide employers' organizations. The new employers' organizations formed during World War II have already made a change in this respect. A general agreement now prevails in the diamond industry. And an even more general agreement, on cost-of-living allowances, has been negotiated between the Histadruth and the Manufacturers Association, with the participation of the official War Supply Board and the Jewish Agency.

Strikes have been moderately numerous, particularly in manufacturing and building. But, with the possible exception of 1942, they have not been—by U. S. standards—particularly acrimonious or hard-fought. Averaged over her whole number of gainfully employed, Palestine has not lost one-fourth of a day's work per person per year, through industrial disputes, even in the war years 1942-44, in which strikes were most widespread.

As the table on p. 290 indicates, the number of persons in strikes was unprecedentedly high in 1942 and 1943. Moreover strikes in 1942 were hard-fought; the average number of days lost by Jews who were on strike was 18, but only 9 in 1943. The diamond industry, in particular, went through long, hard strikes in both years, which accounted for over 60 percent of the total man-days lost in all strikes in this two-year period.

As in other countries, labor disputes were more frequent in good years, with active demand for labor, than in bad years, with substantial unemployment. The most bitter disputes involved union recognition or the employment of Arab labor. In the more serious disputes, the Labor Department of the Jewish Agency has often intervened and generally succeeded in effecting a settlement.

LABOR DISPUTES IN PALESTINE, 1931-43

	Number of disputes		*Workers involved*		*Work days lost*	
	Jews	*Arabs*	*Jews*	*Arabs*	*Jews*	*Arabs*
1931	31	2	1,896	50	9,514	190
1933	40	5	1,439	610	15,465	3,889
1935	36	2	1,641	2,007	12,470	15,945
1937	34	10	3,170	3,135	8,467	12,700
1939	101	2	2,744	220	18,962	473
1940	83	2	2,186	35	21,941	162
1941	78	2	3,453	350	35,342	1,000
1942	107	2	7,659	881	135,594	2,046
1943	136	11	13,703	4,143	117,747	13,903

Sources: *Statistical Abstract*, 1940, p. 107; *Labor Disputes Bull.*, No. 1/1937, p. 10; *General Bulletin*, April 1944; *Annual Report for 1943*, Department of Labour, p. 16. Disputes involving mixed labor classified under Jews.

COLONIZATION ACTIVITIES

The Histadruth has not been content merely to safeguard the Jewish worker in employment opportunities created by others. In keeping with the Labor Zionist objective of establishing a Jewish Workers' Community, the Histadruth has taken the initiative in colonizing work (i.e., creating job opportunities under their own control) and in education. It provides one of the few examples of a trade union actually encouraging and promoting immigration.

Its interest extends to the very first stages of the immigration process. Immediately upon its founding the Histadruth organized training centers in every country having a potentially large number of immigrants to Palestine. The training has attempted to inculcate a "religion of labor," technical training in agricultural work and the rudiments of the Hebrew language and culture. The Histadruth has maintained an "Immigration Center" in Palestine for the clearing of immigrants and their introduction to the Palestinian scene. About 80 percent of all immigrants admitted on labor certificates have used these facilities.

To absorb the labor immigrants economically, the Histadruth has promoted a great variety of more or less cooperative enterprises which have come to comprise the labor economy. The Agricultural Department of the Histadruth together with its counterpart in the Jewish Agency has encouraged the immigrants to form either collective settlements (Kibbutzim or Kvutzoth) or cooperative settlements (Moshvei Ovdim) on land owned by the Jewish National Fund and devoted to mixed farming. Their produce has been marketed cooperatively (Tnuva) and their supplies purchased cooperatively (Hamashbir Hamerkazi); both institutions were initiated by and affiliated with the Histadruth.

To increase the absorptive capacity of these agricultural labor settlements as well as to enhance the standard of living of their members, they have been encouraged to engage in manufactures for sale on the market. Some have organized their factories as an integral part of the settlement. One faction, the Hashomer Hatzair, has entered into partnership with private shareholders to found factories outside of but accessible to their settlements. In wartime at least these enterprises were profitable.

Work opportunities were also created for non-agricultural workers. One of the first instruments was a construction contracting firm (Solel Boneh), which trained unskilled manual laborers and obtained for them contracts for road building, other public works and for private building. It has since become the largest firm in contract construction in Palestine. In addition to its construction activity, Solel Boneh has acquired subsidiary companies engaged in quarrying or in the manufacture of building materials such as bricks, bathtubs, and window glass. It also owns and operates several factories unrelated to the building industry.

Producers' cooperatives for urban workers have also been fostered by the Histadruth. With few exceptions, however, their success has not been notable. Much more successful have been the cooperative societies for passenger transport and goods transport, most of which have been affiliated with the Histadruth. In its efforts to create employment opportunities in maritime pursuits the Histadruth organized Nakhshon Ltd., to promote shipping by sea and deep sea fishing. Together with the Jewish Agency the Histadruth operates an air transport company (Aviron Ltd.).

The cooperative form of organization also was used by the Histadruth in its effort to cheapen the cost of housing for workers in the towns, suburbs and villages. Its instrumentality in this field has been Shikun Ltd. Consumers' cooperatives, the traditional institution of the workers' effort to organize economic activity, have been promoted by the Histadruth but thus far with limited success.

To engage in such far-flung economic activity, it has been necessary to mobilize the financial resources of the workers and to attract the financial resources of non-working-class groups. Once again cooperative societies have been employed in the form of workers' credit cooperatives—although their loans are largely personal loans for consumption. Regular commercial credit for cooperatives affiliated with the Histadruth and for other Histadruth enterprises is supplied by the Workers Bank, itself a Histadruth institution, founded in 1921 with the financial assistance of the Zionist Organization.

Medium and long-term loans to the agricultural labor settlements have been provided in the past decade by the Histadruth through Nir Ltd. Its modest beginnings were based on contributions from the settlements themselves and from other Histadruth institutions. The soundness of its investment practices had induced outsiders to purchase £P 200,000 of its debentures by 1944.

In periods of widespread unemployment, medium and long-term credits for execution of public and semi-public works in the fields of housing, road building and settlement projects are granted by Bizur Ltd. Its capital has been subscribed jointly by the Unemployment Fund of the Histadruth and the Jewish Agency.

The Histadruth has also utilized mutual insurance companies to canalize workers' savings into the labor economy. Hassneh Ltd., which writes general insurance, and Hahaklait Ltd., which insures cattle, are the most important of these organizations.

These are the more important enterprises constituting the "labor economy." They represent labor's contribution, chiefly from its own resources, to the economic absorption of immigrants and the economic beginnings of a Jewish Workers Community. To judge the general design from the presently existing part, it is not a centralized community: it has room for a multitude of small farms, for competition, and for joint investment by private and labor capital. Decentralization seems to be its principle, its strength (in allowing the employment of a great many individual talents in making a multitude of flexible, individual adjustments) and also its weakness (in providing only voluntary instruments for carrying out any general investment policy). Palestinians speak of these enterprises as forming part of the "labor economy" not because they are tied together by an effective business nexus but because they may be identified (more or less accurately) with the social program of the workers' community.

The latter characterization applies particularly to the cooperative societies and the agricultural labor settlements, which formally are not subject to the control of any central Histadruth body. While the Histadruth has provided audit unions, which examine the books of all the cooperatives, these act merely in a formal accounting and reporting capacity; they exercise no supervision.

In its share companies the Histadruth exercises far more effective control than in the cooperative enterprises. The instrument of this control is Hevrath Ovdim, a corporation managed by directors appointed by (and practically identical with) the Vaad Hapoel, the Executive Committee of the Histadruth. The Hevrath Ovdim exercises this control through its holdings of founders' shares, which carry voting rights.

An important factor in the success of the enterprises included in "the labor economy" has been the ability of their managers, whose loyalty the Histadruth has retained despite its policy of giving them small material rewards. Histadruth officers' salaries vary within a narrow range of £P 20-30 a month, depending not on the market value of the services rendered but on seniority and number of dependents. The manager of a large enterprise may earn less than a subordinate with a large family. Moreover the competitive strength of the Histadruth enterprises has been enhanced by the willingness of the parent organization to forego dividends and to reinvest its earnings in widening the range of its products and increasing employment opportunities. The real income of the Palestinian community is enhanced by the willingness of these enterprises to accept a low return for their entrepreneurship.

SOCIAL INSURANCE FUNDS

In other countries where social services have been provided they are usually organized and financed by the government. In Palestine, except for workmen's compensation, these services have been organized by the Histadruth. The principal source of revenue for the Histadruth's social insurance is a tax on the wages of Histadruth members, graduated according to twelve wage classes and ranging from 7 to 11 percent of wages in 1942. Other revenues are derived from an employers' contribution of up to 3 percent of payrolls and from grants-in-aid from Jewish national institutions and from the Government. The table on page 294 sets forth the revenue derived from the unified membership fee in 1943 and its distribution among the various funds.

The average monthly payment per person amounted to 785 mils in 1943.

As previously noted, the Workers' Sick Fund, etablished in 1913 by the agricultural workers, antedates the formation of the Histadruth itself. The workers' efforts to organize medical care must be regarded as an integral part of its colonizing activity. By 1943 the Histadruth's health insurance fund, Kupat Holim, had 104,000 full members; counting the dependents of members, it provided medical care for about 202,000 persons, or about 40 percent of the entire Jewish population. It had 1,575 persons on its payroll, including 905 with professional training—doctors, dentists and nurses. It provides hospitalization for half of the

Jewish hospital patients and one-quarter of the total patients of the country. In addition to medical services, it pays cash benefits to sick workers for a maximum period of six months, after a waiting period of four days. Although it received substantial subsidies from the Jewish Agency in early years, it is now independent of grants either from the Jewish Agency or the Government. In 1943 its total revenue was £P 775,000, of which 73 percent was derived from members' dues, 11 percent from enterprises owned by the Histadruth, 14 percent from private employers, and 2 percent from other sources including a Government grant. Its expenditures on health were more than four-fifths larger than those of the Government of Palestine in the fiscal year 1943-44.

USE OF HISTADRUTH FUNDS

Fund	*Total amount collected in membership fees 1943 (£P)*	*Percent of total*
Organization (including strike fund and education fee)	181,923	23.4
Workers' Sick Fund	374,343	48.1
Invalid Fund	23,484	3.0
Unemployment Fund	70,873	9.1
Fund for Jewish Labor	11,951	1.5
Family Security Fund	15,617	2.0
Old Age Fund	23,882	3.1
Assistance Fund	65,913	8.5
Miscellaneous	10,269	1.3
TOTAL	778,255	100.0

Source: 1943 Report of Histadruth's Accounting Department quoted by Dr. Eva Danelius in *The Industrial Worker in Jewish Palestine 1943-44*, Tel Aviv, Palestine, Dec. 1944 (mimeographed), p. 24.

The Histadruth unemployment fund, Keren Hoser Avodah, is on a much smaller scale. Yet, from an annual average of £P 13,300 in the years 1933-35, its income grew to £P 113,000 in 1942. Its income from contributions was supplemented to the extent of about one-quarter by grants from the Jewish Agency, the Vaad Leumi, and the Tel Aviv Municipality. It both dispenses benefits and makes investments designed to create employment.

In 1930 the Kupat Holim established a special invalidity fund with a maximum benefit of £P 40. The Histadruth established in 1937 a widows' and orphans' fund, which pays £P 50 to the family of a deceased member who has in the past made 24 or more monthly contributions. During the war the Histadruth enlarged its program by establishing an old age benefits scheme, with monthly benefits of £P 2.5 beginning January 1945.

Many of the inadequacies of the program are inherent in the restriction of the tax-base to workers' wages. It must be remembered that more than half of the Jewish community is not covered by these schemes and that all the Arab workers, except for a few covered by the Histadruth's health insurance, are not protected against loss of income through illness, unemployment, old age or death of breadwinner.

EDUCATIONAL AND CULTURAL ACTIVITIES

The Histadruth's educational and cultural activities have been designed to serve its broad purposes. They either assist the Histadruth's colonization efforts in a practical way or imbue the workers with the spirit of the "religion of labor" and the more or less socialistic ideals of the Jewish Workers' Community. In the former category are the Max Pine Boys' Trade School in Tel Aviv founded in 1933, the continuation schools for apprentices (restricted, however, to members of the Histadruth's Youth Organization—Noar Haoved) and the girls' training schools operated jointly with the Women's International Zionist Organization (WIZO). The Histadruth also participates in the broader efforts of the Committee for Vocational Training established by the Jewish Agency and the Vaad Leumi.

The Histadruth's cultural-political activities embrace the needs of its entire membership and their families. It operates a school system for the children which in 1942-43 was responsible for about 24 percent of the pupils within the Jewish public (Vaad Leumi) school system. The working youth under 18 years of age are organized into their own youth organization, as are the wives of the workers. At the end of 1943 the former numbered 7,800 and the latter 33,000.

To link together a membership that is distributed over all of settled Palestine and engaged in diverse occupations, as well as to inform the membership of the varied activity of their organization, the Histadruth publishes a daily newspaper (*Davar*) in Hebrew. It has the largest circulation of any paper in Palestine. It is an important medium for political education and constitutes an effective organ for the representation of Histadruth interests vis-a-vis the Government and the Jewish Agency.

The Histadruth also publishes *Hassadeh* (a monthly devoted to agriculture), *Meshek Shetufi* (a monthly devoted to cooperative affairs), and *Hegge* (a newspaper for those not proficient in Hebrew). It supports a Workers' Theater, Ohel, and a sports organization.

THE "LABOR ECONOMY"

The magnitude of Histadruth activities has been expressed in economic terms. Dr. Gerhard Muenzner has estimated that in 1945 the value of all capital invested in the "labor economy", including the agricultural labor settlements, the social insurance funds and the cultural institutions, amounted to £P 17,000,000 to £P 18,000,000. This represents between 10 and 15 percent of the total investment in Jewish Palestine since 1919. It is evident, in view of the diversity of its activity and the scale of its operations, that the Histadruth's claim of establishing a Jewish Workers' Community represents more than rhetoric.

The Jewish trade union movement has attempted to achieve for Jewish labor a Western standard of living and an expanding economy which could absorb more Jewish immigrants. Consequently it has insisted that Jewish employers hire only Jewish workers and has devoted its best efforts to the creation of a "labor economy." Its affilitates and own institutions dominate the fields of mixed agriculture, contract construction and road transportation. Nine-tenths of all Jewish workers are organized into unions, with an active economic, social and cultural life. This labor movement is energetic, creative of new enterprises and new forms of social organization, decentralized, abounding in parties and doctrines, and full of active, surging life. It constitutes not only the leaven but nearly half of the loaf. It is therefore in many ways the most vital center of all that Jews have accomplished in Palestine.

ARAB WORKERS

In the Arab community of Palestine there is no counterpart to the Histadruth. In contrast, the Arab labor movement is pitifully weak. In a country where Arabs outnumber Jews more than two to one, Arabs have only perhaps one-seventh as many organized workers as Jews. Arab enterprises, moreover, are even more hermetically sealed against Jewish employees than are Jewish enterprises against Arabs.

Middle East nationalist leaders, employers, and governments have been, for the most part, hostile to trade unions and to all labor activity. Iran has made strikes illegal. Turkey has prohibited both unions and strikes. Egypt outlawed the closed shop in September 1942, when it legalized trade unions for the first time but only if they refrain from all "political" activities and do not federate. The French Administration in Syria and Lebanon managed successfully to combat unionism without any legal sanction. These are important aspects of the Middle East background. Arab nationalism has had very little sympathy with popular aspirations for social improvement. It was by no means untypical for Moslem "patriots" to denounce the demand of Arab workers in Haifa for an eight-hour day as a menace to country and religion. The attitude of many Arab national leaders is not far from that of the Hungarian nobleman who pleaded with his Oxford tutor to be allowed a vacation from his studies to serve as a strikebreaker, "For I do hate the poor!"

Perhaps the first attempt to organize Palestinian Arabs into unions was that made in 1920 by Jewish employees of the Government Department of Railways, Posts and Telegraph. Jews and Arabs formed a single local. There is evidence that the Histadruth's approval was not enthusiastic.

By 1927, however, the Histadruth recognized the need for organizing Arab workers by creating the Palestine International Labour League. It was to have two autonomous sections: a Jewish section, the Histadruth, and a prospective Arab section. Limited progress, principally in Haifa and Jaffa, came to a halt during the disturbances of 1936-37. In 1944 the Arab section claimed a membership of 2,500.

There also have been attempts at unionization of Arab workers by the Arabs themselves. Some of the so-called unions were more concerned with nationalist aims than with trade union activity, and these unions frequently included employers. The most considerable of the completely independent Arab unions is the Palestine Arab Workers Association. Founded at Haifa in 1925, it claimed 5,000 members in 1944. Its membership included four affiliated producers' cooperatives and two consumers' cooperatives. Next in size, among the independent Arab unions, is the Federation of Arab Trade Unions and Labour Societies. Founded in 1930, it claimed a membership of 3,000 in 1944.

In July 1942 a Department of Labour was created in the Palestine Government, in part because of "the lack of responsible guidance and leadership in the Arab trade union movement." Early in 1943, the Department held an Arab Workers' Conference, at which an official of the Department (formerly an English trade union official) expressed the hope that Arab labor would form a single federation with a membership of 50,000. The friendly attitude of the Government undoubtedly encouraged the recent formation of a union of Arabs employed by His Majesty's Forces, Regie Laborers, with an estimated membership of 6,000. Including this union, the total number of organized Arab workers in 1944 was about 16,500.

CHAPTER 19

MONEY AND FINANCE

THE MONETARY SYSTEM

From the British military occupation of Palestine during World War I to November 1927, Egyptian currency circulated in Palestine and was recognized as legal tender. The Egyptian pound (£E) was firmly linked to the pound sterling (£) by Egyptian sterling reserves and sterling convertibility. On November 1, 1927 this Egyptian currency began to be replaced by Palestinian currency. On April 1, 1928 the Palestinian currency was made the sole legal tender. This Palestinian currency was also firmly linked to the £, at an exchange rate of one for one. The sterling value of the Egyptian currency that was called in constituted a 100 percent sterling reserve for the new issue. Additional Palestinian currency was issued only in exchange for sterling. The Palestinian pound (£P) has, therefore, always had a sterling reserve of 100 percent (or more). The £P is, in fact, sterling in the thinnest disguise.

The currency affairs of Palestine are managed by the Palestine Currency Board. The Board is appointed by the United Kingdom Secretary of State for the Colonies, in agreement with the British Treasury. The Board sits in London and conducts its currency exchange business in Palestine through an Agent, Barclay's Bank. The Agent has no discretion. His sole function is to exchange pounds sterling for pounds Palestinian, and vice versa. The Board charges one-eighth of one percent for this service.

Though the Palestinian pound has always been exchangeable with the British, one for one, Palestine has not adopted the British fractional units of shillings and pence. The Palestinian pound is divided instead into 1000 mils. In addition to notes of larger denomination, there is a 500 mil note. Coins are minted in denominations of 1, 2, 5, 10, 20, 50, and 100 mils.

As Palestine's economic activities have expanded, more currency has been needed to do business. On presentation of sterling the Board has supplied that currency. The Board has therefore accumulated a large sterling balance—pound for pound of the currency that it has issued. The total Palestinian currency outstanding increased from 0 on November 1, 1927 to £P 2.4 million on March 31, 1932, £P 6.7 million on March 31, 1939, and £P 41.5 million on December 31, 1944. This increase meant a corresponding payment of sterling (plus service charges) to the Board.

The Board has invested the sterling received in exchange for Palestine currency in British and Empire sterling securities, readily convertible into cash on the London securities market. From its income on investments and the proceeds of its service charges, the Board makes periodic payments to the Government of Palestine. By October 31, 1944 the Board had contributed a total of £P 2,060,000 to Government revenues. Yet the Board's sterling assets were, and continue to be, greater than the total volume of Palestine currency in circulation. Were every note and every coin outstanding in Palestine to be presented for redemption at one time, the Board would be able to convert them all into sterling and retain a surplus!

The Board performs none of the domestic functions of a central bank. It has made no advances to banks or private businesses and has played an insignificant part in the financing of Government. Though the Board is reported to have held a small fraction of its assets at one time in Government of Palestine securities, in general the Board does not issue currency on the security of banking paper, private commercial paper, or Government obligations. There has been no Board action to adjust the supply of currency to aid banks, to facilitate investment, to stabilize the price level, to help maintain full employment, or to accomplish any other general economic policy. The Palestine Currency Board has not been conceived as an instrument of economic development.

In fact, though Palestine has been a country of capital scarcity and high interest rates, the Palestine Currency Board has been an institution for capital export. The sterling turned over to the Board in exchange for Palestinian currency has been invested almost entirely in British and Empire securities. Palestine has therefore supplied other British countries with capital. This is the price paid for the maintenance of so large a sterling currency exchange reserve.

It may be seriously questioned whether, in the actual circumstances of Palestine's monetary and exchange position, the policy of holding a 100 percent sterling reserve had any reasonable justification. Palestine had only small foreign-owned short-term balances. Most of her capital had been supplied by immigrants, national institutions and long-term investors. The maximum year-to-year (April 1-March 31) decrease ever experienced in the total volume of currency outstanding (and therefore in net claims on the Palestine Currency Board) was less than £P 620,000. This was less than 15 percent of the Board's assets at the time. The Board has always been very liquid, but it has not used its liquid assets for advances to Palestine. Had the Board been willing to hold only part of its assets in sterling, the remainder could have been placed in Palestinian public and private obligations—had suitable obligations been available for purchase. This activity would have contributed to lowering interest rates and facilitating development. The Board would have begun to act as a central bank. Hitherto no such central banking services have been undertaken.

It may, however, be seriously questioned whether any responsibility can rightly be attributed to the Palestine Currency Board (as distinguished from the United Kingdom Colonial Office) for failing to use its monetary powers as instruments of development policy. If a monetary authority is to purchase government obligations, government must offer such obligations. If a monetary authority is to engage in the discounting of private paper, there must be either an organized private market in such paper or else government guarantees must take the place of commercial assurances. The deficiencies of Palestine's monetary policy are, at worst, the attenuated shadows of the deficiencies of her fiscal policy.

STERLING PARITY

Because of the fixed exchange ratio between the Palestinian pound and the pound sterling (and the small commission charged for converting one into the other), the dollar-£P rate is almost identical with the dollar-£ rate. The following table indicates the fluctuations in the dollar-£ rate during the 1930's.

ANNUAL AVERAGE DOLLAR VALUE OF THE POUND, N. Y. MARKET

1931	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*	*1939*	*1940*	*1944*
$4.53	$3.51	$4.24	$5.04	$4.90	$4.97	$4.94	$4.89	$4.44	$4.035*	$4.035*

Source: Federal Reserve Board, Washington, D. C. *Official rate. The dollar-£P rate, for large transactions, could differ with this only by a maximum of 1/8 of 1 percent

In terms of dollars, the £P had wide fluctuations in value until the imposition of wartime exchange controls. In terms of sterling, however, the £P has remained stable—and this stability has been most important because the U. K. constituted the great market for Palestine's exports.

For over a decade (1920-31), however, it seems that Palestine must have suffered severely from her fixed parity with sterling. The rate at which sterling was "returned" to the gold standard after World War I exerted a severe deflationary pressure on English economic progress until 1931, when the link with gold was broken.

Palestine was attached to sterling (via the £E) when her wartime inflation was much greater than that of the U. K. Her subsequent deflation was correspondingly more severe.

WHOLESALE PRICES IN PALESTINE, 1920-39
(1920 = 100)

1920	*1921*	*1923*	*1925*	*1927*	*1929*	*1931*	*1935*	*1939*
100	64	41	45	41	37	28	30	31

Source: *Statistical Abstract,* 1943. Index based on prices of food and fuel.

The general trend of prices was downward until 1931. Such a trend increases the burden of all debts and is extremely discouraging to all business enterprise. The over-valuation of the currency makes imports cheap. The necessity of deflating the price level to coincide with the sterling parity, rather than choosing a different exchange rate permitting a more stable price level, may be an important reason for the meager economic progress achieved in Palestine in the 1920's.

The close tie between the £P and the £ facilitated the process of making Palestinian resources available for Great Britain's war effort, without requiring any special monetary arrangements. British war supply authorities who wished to make expenditures in Palestine had only to present their sterling to any British or Palestinian bank to have it converted into currency or deposits in Palestine. Money spent in Palestine would either remain in the hands of the public (as currency in circulation) or be redeposited with Palestine banks. If deposited with Palestine banks, those banks would accordingly increase their balances with their correspondents in London. In any case, Palestinians would in fact be trading their current goods and services for sterling credits. Those credits could be used for imports from Britain only to the extent that British exchange and export controls permitted. It mattered not one whit whether Palestinians preferred to hold currency in Palestine, deposits in Palestine, or deposits in London. In any case they were lending to Britain.

The table on the next page indicates the total growth of the supply of money in Palestine during the war years.

The increase of approximately £P 88 million in the total supply of money in Palestine, during the war years, affords a rough measure of the resources made available (net) to Britain by Palestine through (a) increased holdings of currency and (b) expansion of the Palestinian deposit structure.* This £P 88 million is not an exhaustive total of the resources made available by Palestine, during the war, to Great Britain. Other resources were made available by Palestinian individuals and companies (other than banks) acquiring deposits, securities and other assets in Britain. Even this £P 88 million, however, is already an impressive total—being of the same order of magnitude as Palestine's total national income in 1943.

PALESTINE'S SUPPLY OF MONEY, 1939-44

End of year	*Currency in circulation*	*Total deposits*	*Total money supply*	*Annual rate of increase in total money*
1939	£P 8,526,000	£P 16,199,000	£P 24,724,000	
1940	10,616,000	15,749,000	26,364,000	6%
1941	13,367,000	21,708,000	35,075,000	33%
1942	24,052,000	31,573,000	55,626,000	57%
1943	35,979,000	53,616,000	89,595,000	61%
1944	41,517,000	71,135,000	112,652,000	26%

Source: *General Bulletin.* All figures rounded.

Before the war, the close link with sterling meant that Palestinian wholesale prices moved up and down in close synchronism with price movements in Britain and the sterling area. Making allowance for changes in exchange rates, they also moved in broad coincidence with dollar prices. Any sharp discrepancy was ruled out by the freedom of exchange transactions and the possibilities of moving a wide variety of wholesale commodities freely in international trade. Under war time conditions, however, this synchronism was broken by exchange controls, Government trading, and the rise in shipping costs. The following table indicates how badly Palestinian wholesale prices have diverged from British ones. Due to the devaluation of sterling by 17.5 percent (from $4.89 to $4.035) since 1938, Palestinian (and British) wholesale prices have risen even more in comparison with dollar prices.

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* This total actually probably understates the amount advanced to Britain through these media. The currency expansion (£P 33 million) was matched, pound for pound, by increased holdings of sterling. The deposit expansion (£P 55 million) must have been more than matched by advances to Britain, primarily in £ but partly in £P, for the following reasons: (a) Palestine banks increased their advances and discounts by £P 3 million; ostensibly this should be deducted but (b) there was a great increase in loans and advances to carry British orders; this should be added, and (c) a change in accounting practice in June 1944 eliminated £P 3.2 million of duplication in the deposit structure; therefore total deposits grew more than is indicated by the above table.

The divergence between sterling and dollar prices in October 1944 was exactly the same as the devaluation of sterling between 1938 and 1944 (namely 17.5 percent of the sterling values).

WHOLESALE PRICES IN PALESTINE, U. K. AND U. S. A.

Date	*Palestine*	*United Kingdom*	*United States*
January 1938	100.0	100.0	100.0
December 1939	107.7	113.6	97.8
December 1940	134.6	138.0	99.0
December 1941	197.0	144.8	115.4
December 1942	263.5	149.8	124.0
December 1943	296.4	151.7	126.9
October 1944	313.7	154.8	127.8

Source: Official indices of the three countries, converted to a common base of January 1938 = 100.

Therefore, if calculated in terms of dollar values at both dates, sterling and dollar wholesale prices were in exactly the same relationship in October 1944 as they had been in January 1938; in terms of dollars, both the British and American prices rose by 28 percent. Palestine wholesale prices, computed in the same way, were slightly more than twice as high as those of the United Kingdom and the United States; in terms of dollars, Palestine prices rose by 159 percent.

A broadly similar picture emerges when comparisons are made in terms of the rise in cost-of-living indices. In this case, however, Palestine's rise is slightly less spectacular. The lesser rise is due to two factors: (1) the Palestine cost-of-living index understates the true cost of living, by 15 percent according to the estimate of the Government Statistician;* and (2) some local services, particularly rents, have risen less in price than other things.

COST OF LIVING IN PALESTINE, UNITED KINGDOM AND U.S.A.

Date	*Palestine* (*Prewar"=100)*	*United Kingdom (1935-39=100)*	*United States (1935-39=100)*
1939 Average	100	104	99
1940 Average	117	121	100
1941 Average	140	131	105
1942 Average	193	132	117
1943 Average	233	131	124
1944 Average	242	132	125
1944 December	252	133	127

Sources: Palestine, for 1940 and 1941 Jewish Agency index, for 1942-44 Wages Committee official index; U.K. and U.S.A., official indices throughout.

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* There is also some understatement in the other countries but of lesser magnitude than in Palestine.

Under war conditions the sterling parity of the Palestinian pound did not serve to keep Palestinian prices "in line" with world prices.

THE BANKING SYSTEM

Palestine has a great number and variety of private credit institutions for so small a country. They include foreign commercial banks, domestic commercial banks, cooperative credit societies, and credit (mortgage) banks. At the end of 1943, there were 27 commercial banks, 84 regularly reporting credit cooperative societies, and about 10 mortgage banks. This is quite a complement of banking institutions for a country numbering less than 1,800,000 people! Conspicuously lacking, however, are the government credit institutions for agriculture, housing, and special industrial requirements common in countries where government takes a wide and active responsibility for economic progress.

Commercial banking is defined by Palestinian law as "the business of receiving from the public on current account money which is to be repayable on demand by cheque, and of making advances to customers." Local commercial banks are required to have an authorized capital of not less than £P 50,000 of which £P 25,000 must have been paid in. This capital requirement has been the major reason for the reduction in the number of local banks from 68 in March 1937 to 20 at the end of 1944. Foreign banks operating in Palestine are required to have a paid-up capital of £P 100,000. There are now 5 foreign banks operating in the country—one (the Banco di Roma) having been eliminated during the war.

The table on page 305 indicates the distribution of commercial banking business at the end of 1943. (Two local Jewish banks have since been eliminated.)

The ratio of advances to total deposit and other liabilities may serve as a crude index of the "intensity" with which the various classes of banks were in fact using their resources for the financing of Palestinian economic activities. By this index, the Arab local banks come first, with a ratio of 60 percent, and the Jewish local banks just behind, with a ratio of 59 percent. In contrast, the Anglo-Palestine Bank shows a ratio of 13 percent and the other four foreign banks a ratio of 8 percent. These foreign banks were holding the larger part of their assets in London, either in deposits with their correspondents and home offices or in short-dated British Treasury securities.

Palestine's foreign banks have always been highly liquid and have always held a large part of their liquid assets in London, but this traditional practice has been greatly accentuated by the wartime liquidity of the whole Palestinian economy. The foreign banks have been the passive channels whereby British Treasury expenditures in Palestine have been converted into Palestinian holdings on the London money market. The liquidity of the foreign banks, however, is merely the extreme case of what is true throughout the Palestinian deposit-banking system. The general condition is indicated strikingly by the following table.

POSITION OF PALESTINE'S COMMERCIAL BANKS, DECEMBER 31, 1943
(*Millions of £P*)

	Capital and reserves	*Cash and with other banks*	*Foreign investments*	*Advances, etc.*	*Other assets*	*Deposits and other liabilities*	*Deposits and other liabilities (percent of total)*
Foreign banks:							
Anglo-Palestine Bank	1.0	7.4	11.8	3.1	0.6	22.9	43%
Other foreign banks (4)	*	16.8	.2	1.6	.3	18.9	35%
Local Jewish Banks (20)	2.2	4.4	.6	4.4	.3	7.5	14%
Local Arab Banks (2)	.6	1.8		2.4	.4	4.0	8%
TOTAL		30.4	12.6	11.5	1.6	53.3	100%

Source: Statements of the individual banks. *Omitted because capital not used primarily in Palestine.

DEPOSIT STRUCTURE OF PALESTINE, 1936-44

	1936	*1938*	*1940*	*1942*	*1943*	*1944*
Ratio of credit outstanding to total deposits	73.0	80.6	78.3	44.0	28.4	24.0
Ratio of demand deposits to total deposits	78.4	72.2	81.6	90.1	91.8	90.1

Source: Annual averages derived from *General Bulletin*. Includes both banks and cooperative societies.

The first line of this table shows that, during the war, deposits in Palestine banks were created by cash presented to banks rather than by bank advances; the cash came from abroad. The second line of the table indicates that individuals and firms depositing cash with banks have preferred to hold it on demand rather than on time.

In spite of the growth of total deposits from an average of £P 18.1 million in 1939 to an average of £P 63.4 million in 1944, deposits have become relatively less important in comparison with currency than they were in the 1930's.

In a prosperous peace year such as 1935, the use of banking facilities was so general that bank deposits accounted for about 73 per cent of the total money supply. In 1944 bank deposits accounted for only 62 per cent of the total money supply. This shift reflects primarily the proportionately larger money savings that were being made in 1944 by persons—particularly Arab Fellaheen—unaccustomed to using banking facilities. It reflects also, in some degree, the increase in cash holdings designed to evade wartime income tax liabilities.

PALESTINE DEPOSITS, CURRENCY AND TOTAL MONEY, 1931-44
(*Millions of* £P)

	Average 1931	*Average 1935*	*Average 1939*	*Average 1944*	*Year-end 1944*
Deposits	5.0	16.0	18.1	63.4	71.1
Currency	2.3	5.9	7.6	39.0	41.5
Total money	7.3	21.9	25.7	102.4	112.6

Sources: For 1931 and 1935, estimates of *Palnews Annual* for 1936 and 1937. For other years, *General Bulletin.*

THE PRINCIPAL BANKS

During the war years, the Anglo-Palestine Bank—formerly second to Barclay's—became the largest bank in Palestine. On December 31, 1943 the Anglo-Palestine held about 43 percent of the total deposits of the country and on June 30, 1944 about 45 per cent. Established in 1902, the Anglo-Palestine is almost the National Bank of the Zionist movement. It acts together with the Jewish Agency for Palestine in a great variety of agricultural and industrial financing—attempting, within the limits of their means to compensate for the absence of a Government bank and a Treasury interested in development. Yet the Anglo-Palestine has many Arab and other non-Jewish customers. It is only technically a foreign bank. While it is incorporated in England and has mainly British capital, its board resides in Palestine, and its ordinary banking business is concentrated there.

Most important among the genuinely foreign banks is Barclay's (Dominion, Colonial and Overseas). Barclay's acts as Banker for the Palestine Government and Agent for the Palestine Currency Board. It also has especially close connections with British firms operating in Palestine. Its prestige is greatly enhanced by its affiliation with Barclay's Bank, Ltd., an institution commanding much greater financial resources than the whole Palestinian economy.

After the Anglo-Palestine and Barclay's, the only important foreign bank is the Ottoman Bank. It has a paid-up capital of £P 5,000,000 and reserves of £P 1,250,000. With a head office in London and branches throughout the Middle East, it resembles Barclay's in that Palestine supplies only a very small fraction of its total business. The other two foreign banks now operating in Palestine (the Polish Savings Bank and the Holland Bank Union) do a very small volume of business.

About four-fifths of the total deposits of Palestine in 1944 were held by the Anglo-Palestine, Barclay's, and the Ottoman. The rates of interest charged by these banks were perhaps 1 per cent higher than those prevailing in the United Kingdom. An ordinary commercial overdraft might cost 4 per cent to 5 per cent in the United Kingdom; it would cost 4½ per cent to 6 per cent in Palestine. These rates of interest are not substantially higher than commercial loan rates in the U. S. A. In comparing these percentages with U. S. banking charges, it should be kept in mind that the U.S. system of granting loans in round amounts (and charging interest on these round amounts!), while expecting the client to keep a portion of the loan on deposit at no interest is practically unknown in the United Kingdom and the Middle East—and would be considered a great scandal there! In Palestine, as in the United Kingdom, interest on bank loans is paid only on day-to-day debit balances.

Except in the case of the Anglo-Palestine, even the "big three" have no investment portfolio (as distinguished from discounts and advances). There are no Government securities in Palestine for a bank to buy—though leading bankers profess to be interested and even eager to buy such investments should they be offered. Whatever funds Barclay's and the Ottoman have, beyond the needs of their ordinary credit business, are remitted to their London head offices. The Anglo-Palestine invests only in short-dated British Treasury obligations. On December 31, 1943 the Anglo-Palestine alone held 94 percent of all the investments of the Palestinian commercial banking system.*

After the "big three" foreign banks, the cheapest credit is granted by four special-purpose banks. These are the Workers' Bank, the Central Bank of Cooperative Institutions, the Palestine Industrial Bank, and the Palestine Corporation. Because of the special character of their operations and the services rendered in connection with these operations, their credit customarily costs perhaps 1 per cent more than that of the big three.

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* Strictly speaking this was true only of foreign investments, but holdings of domestic investments were negligible.

In addition to the big three and these four special purpose banks, there are nine other local banks that do a considerable volume of business. These are: the Arab Bank, the Arab National Bank, Ellern's Bank, J. L. Feuchtwanger, Hoffnung's Bank, Jacob Japhet & Co., Kupat Am Bank, Palestine Mercantile Bank and Palestine Discount Bank (latter two now affiliated). In part their credit is granted on the same terms as those offered by the "big three" or the "special four." In part, however, it is granted at higher rates because it involves greater risks than the other banks would accept. Rates of 8 per cent and even higher (including all commissions and charges) are not unknown even with the present liquidity.

COOPERATIVE AND LABOR CREDIT

Credit cooperatives, although engaging essentially in the same business as other banks—receiving deposits and granting credits—seek especially to promote the interests of their members. Although they accept deposits from outsiders, they lend money only to their own members.

Such cooperative societies exist among Arabs as well as Jews, but only the Jewish ones function on a continuing basis. To quote the official statement of the Government of Palestine, "Only Jewish societies submit monthly statements of their assets and liabilities. The activities of the Arab societies are seasonal; loans are obtained from banks, distributed to members and repaid once a year. No monthly statistics are therefore available." Eighty-four Jewish cooperative credit societies (33 urban and 51 rural) now voluntarily submit regular statements to the Government of Palestine. On December 31, 1944, these 84 societies had 80,000 members, a capital of £P 650,000, deposits of £P 6,456,000 and credits outstanding of £P 2,087,000. They were an important factor in the Palestinian financial system.

Cooperative credit institutions have, however, declined in relative importance in the Palestinian financial picture since the 1930's. This decline is due partly to the conversion of cooperative societies into regular banks.* It is also partly attributable to the increased liquidity of all Palestinians, diminishing the need for cooperative credit assistance.

During the early 1930's credit cooperatives expanded rapidly. From 53 in 1930, they increased to 237 in 1937. Since then their number has shown a net decline of about 15.

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* In this respect the trend in finances parallels that in industry. While labor-sponsored corporations are expanding, cooperatives are declining in relative importance.

On the other hand, several labor financial institutions sponsored by the Histadruth (General Federation of Jewish Labor), but not organized according to cooperative principles, have flourished. These institutions are The Workers' Bank, Nir Ltd. and Bizur Ltd. These institutions tap the financial resources of the Histadruth and its members and lend these resources to Histadruth industrial corporations, agricultural settlements, housing companies, and other development bodies. Their growth is in sharp contrast to the relative decline of the credit cooperatives.

THE ROLE OF COOPERATIVE BANKING

	1937	*1939*	*1942*	*1944*
Total deposits	100.0	100.0	100.0	100.0
Banks	83.2	91.3	94.8	91.7
Cooperatives	16.8	8.7	5.2	8.3
Advances and bills discounted	100.0	100.0	100.0	100.0
Banks	75.2	84.4	86.6	87.7
Cooperatives	24.8	15.6	13.4	12.3

Sources: *Statistical Abstract* and *General Bulletin.*

MORTGAGE CREDIT

Mortgage credit is sufficiently separate from other banking operations in Palestine so that the law recognizes a special class of "credit banks" that "have as their principal object the lending of money on the security of immovable property." Credit banks, insurance companies, and private lenders have been the chief suppliers of funds for mortgages. The Government of Palestine has not been active in this field.

Until the late 1930's private lenders were the most important suppliers of mortgage funds. Normal prewar interest rates were 8 to 9 per cent for first mortgages of about 5 years maturity and of a principal amount equal to one-half the value of the mortgaged property. Second mortgages at even higher rates were common. Mortgage loans of up to 90 per cent of the value of housing at 4 per cent to 5 per cent interest and with amortization of 20 years or more, such as Government initiative had established in the United States and other advanced countries, were unknown in Palestine.

Insurance companies and such credit banks as the General Mortgage Bank of Palestine (affiliated with the Anglo-Palestine Bank) have played a very constructive role in reducing mortgage interest rates. The General Mortgage Bank grants long-term (20-year) amortization mortgages at rates below those offered by private lenders. Yet even in 1944 the bank charged about 6 percent.

Indeed the lowering of the General Mortgage Bank's long-term rate to 6 per cent was regarded in Palestine as the conclusive evidence of wartime liquidity. Palestine still has far to go before she will be offering funds for mass housing at rates commonly regarded as supportable by the lower income groups even in much more prosperous countries.

The peak of mortgage activity was experienced in the building boom of 1933-35. Due to the disturbances of the years 1936-37, the practical cessation of private building during the war years, and the extreme liquidity which the war brought the Palestinian economy, mortgage activity has not regained that peak.

PALESTINE REGISTERED MORTGAGES, INCLUDING REFINANCING
(*Thousands of* £P)

1932	*1935*	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944**
1,375	7,103	4,470	2,638	2,408	1,876	2,570	3,906	3,600

Sources: *Statistical Abstract* and *General Bulletin.* *1944 estimated.

Allowing for price changes, the level of mortgage activity in the latter years of the war was lower than in the earlier years. The volume and terms of mortgage credit will, however, again become a financial issue of the first significance as soon as materials and labor for civilian construction again become available on an adequate scale.

CORPORATE FINANCING

Most of the capital invested in Palestine during the past quarter century (apart from the capital supplied by public and quasi-public bodies) has been invested in enterprises owned by individuals and partnerships. Such enterprises have been dominant in citriculture, other private farming, housing, commerce, handicrafts, and even manufactures. The largest concerns having a corporate form have derived all or most of their resources from the capital market outside of Palestine. Even at the end of 1944 there were only about eight firms with extensive operations in Palestine that had capital and reserves of over £P 750,000; they were all firms with predominantly foreign capital. The only wholly Palestinian firm of a size nearly comparable to theirs (so far as published information indicates) was Koor Limited, the holding company of the Solel Boneh enterprises, which had a paid-up capital of £P 650,000.

Nevertheless corporate organization has become steadily more important as economic activity has expanded. There has been a net increase of about 3,400 in the number of domestic Palestinian corporations in the past 25 years. About 94 per cent of this net increase has come since 1932. Corporate organization, reorganization, and refinancing was particularly active in 1943 and 1944, when the Palestinian economy was very liquid and business was preparing for postwar expansion.

INCREASE IN NUMBER OF COMPANIES (CORPORATIONS) IN PALESTINE, 1920-44

Years	*1920-25*	*1926-31*	*1932-37*	*1938-42*	*1943-44*
Number of new companies	119	130	1,033	1,390	1,168
Number of companies terminated	6	25	191	183	*
Net increase in number of companies	113	105	842	1,207	*

Sources: *Statistical Abstract* and *General Bulletin*. *Not available.

The net increase in the authorized capital of Palestinian corporations during the past 25 years is in excess of £P 42 million. Of this increase, 86 per cent has come since 1932. Authorized capital is only a very rough measure of resources because the paid-up capital is often substantially less; on the other hand, many firms have substantial reserves, in excess of their authorized capital.

INCREASE IN AUTHORIZED CAPITAL OF COMPANIES IN PALESTINE, 1920-44

(*Thousands of £P*)

Years	*1920-25*	*1926-31*	*1932-37*	*1938-42*	*1943-44*
Authorized capital of new companies	3,002	2,433	8,415	5,701	7,384
Increases of capital	261	539	8,144	2,985	6,720
Decreases of capital	66	382	1,841	1,110	*
Net capital increase	3,197	2,590	14,718	7,576	*

Sources: *Statistical Abstract* and *General Bulletin*. *Not available.

A Securities Clearing House was established at Tel Aviv in 1935. The new central European immigrants were used to buying securities, and Palestine's larger corporations wished to use the market as a source of capital. By 1938 there were 18 issues listed for trading, principally debentures and preferred stocks. The securities listed represented companies interested in mortgages, land development, construction, municipal improvements, and exploitation of Dead Sea chemicals.

Until the outbreak of World War II, prices on the securities exchange showed no decided trend. The outbreak of war was met by the introduction of minimum quotations. This control was retained, however, for only 6 weeks. On October 8, 1939 the minimum quotations were abolished. A representative security, the 5 per cent debentures of the General Mortgage Bank, which had been frozen at 91, declined by about 8 per cent to 84.

In the first 2 years of the war, securities quotations rose slowly. Only in 1942 did they generally pass the prewar level. At the beginning of 1945 they were much higher than ever before. For instance, the ordinary shares of the General Mortgage Bank, which were quoted at an average of 106¾ in 1936 and 106¼ in 1939, were quoted at 145¾ on January 31, 1945. The trend in the securities market reflected the general wartime liquidity of Palestinians and the demand for investment assets. This demand has also resulted in the substantial "repatriation" of the securities of corporations organized abroad but operating in Palestine.

The general course of security prices is suggested, in broad outline, by the yield experience of the 5 per cent debentures 1941/57 of the General Mortgage Bank, replaced in July 1944 by 4 per cent debentures 1949/64.

YIELD OF GENERAL MORTGAGE BANK DEBENTURES DURING 1938-44

1938 *average*	*1939* *average*	*1940* *Dec. 30*	*1941* *Dec. 30*	*1942* *Dec. 30*	*1943* *Dec. 30*	*1944* *Dec. 30*
5.2%	5.6%	6.2%	5.9%	5.1%	4.9%	4.0%

Source: *Statistical Abstract* and press quotations.

After the fall of France and during the advance of Rommel toward the Nile, securities values fell and the yields of debentures accordingly rose. Since then, with increased security and liquidity, values have risen and yields declined. Given appropriate public policy, this decline in yields could be made a permanent step toward the much-needed generally lower level of interest rates.

INTEREST RATES

Until the emergence of the liquidity produced in Palestine by the economic developments of World War II, interest rates were so high as to constitute a major obstacle to the economic development of the country. In the early 1920's, the "respectable" short-term rate was about 12 per cent (9 per cent and 3 per cent commission) and long-term rates (including discount and commission charges) were from 9 per cent up. Even in the early 1930's Arab Fellaheen commonly paid 30 per cent for seasonal agricultural credit. In 1935 the Government of Palestine felt impelled to sponsor the foundation of an Agricultural Mortgage Company to assist in the reduction of the cost of agricultural credit.

With the inflow of Jewish capital in the 1930's interest rates fell gradually. Precise measures of the fall are lacking because of the multiplicity of charges, terms, commissions and rates and the absence, in the earlier period, of organized security markets or any regular publication of interest rates. Many factors contributed to keeping rates higher than in the most favored Western countries. The absence of any central bank made it necessary for the private banks to maintain large amounts of cash. Banks paid interest on demand deposits and therefore had to charge higher rates on loans. The demand for bank loans was brisk due to the rapid growth of the economy and the widespread practice of using short-term credits for long-term purposes. There was a general conviction in financial circles that the risks of a young country called for higher interest charges than in England or America. When these factors are taken into account, the interest rates charged by Palestinian banks in the late 1930's are surprisingly low.

Foreign banks in Palestine generally pay ½ per cent on demand deposits and local banks up to 2½ per cent. On time deposits, customers receive from 1½ to 4½ percent. These liberal bank interest payments must be taken into account when banking charges are compared with those of countries like the United States, where no interest is paid on demand deposits and only rarely as much as 2 per cent on time deposits.

It must also be appreciated, when commercial interest rates are discussed, that in a poor country like Palestine a great deal of borrowing is done by persons who are not credit-worthy from the point of view of a commercial banker. Sometimes such borrowers, by pooling their resources, can form strong credit cooperatives, but more often they must resort to the private money-lender. Particularly in the Arab village, where indebtedness to a money-lender was often formerly a lifetime social status, such borrowing involves both economic and personal relations utterly remote from those of the organized money and capital markets of developed countries. Aided by wartime inflation, the Fellah has been able to free himself of debt—perhaps for the first time in centuries. The influence of the Arab money-lender, to whom the 20 per cent is a very low rate—almost charity—is now at a very low point.

The liquidity of the Palestinian economy in 1944 was so great that Palestinians were becoming accustomed to think in terms of low interest charges. Between 4 and 6 percent was coming to be regarded as normal for banking commercial credit, 5 to 6 per cent for mortgage loans, and 5 to 6½ percent for industrial long-term obligations (such as preferred stocks). A public policy of reducing interest rates further would encounter no insuperable obstacle if implemented by an appropriate monetary and banking policy. Such a public policy could mean much both for the development of Palestine's economy and for the welfare of her humbler social classes.

LIQUIDITY AND INVESTMENT FINANCING

By the standards of good housekeeping, Palestinian monetary and financial institutions have had a very good record during the past 25 years—a much better record than that of the corresponding institutions in the United States. Palestinian depositors and investors have not at any time sustained such losses as were experienced by the American public in the early 1930's. The Palestinian banking system has always been sufficiently liquid to meet the claims of its depositors. The Palestine pound has always been convertible into sterling at par. These are considerable achievements.

If the expressions of Palestinian bankers are to be taken at face value, Palestinian financial institutions may claim the further service of always having been in a position to meet the credit needs of credit-worthy clients. This claim is, however, much more imposing than substantial. No group of bankers has ever conceded that they were not in a position to meet the needs of credit-worthy clients. During periods when general economic activity is declining almost everybody who wants credit ceases to be credit-worthy.

The history of Palestinian financing during the past quarter century can be understood best if it is viewed as a series of efforts to form institutions so constituted that they could use depositors' funds, in association with founders' capital, for something approximating equity participation in economic development. Commercial banking developed early in Palestine, and several banks have strong foreign affiliates; yet commercial banks could not—and cannot—supply much of the type of financing most needed. Failing Government guarantees, the support of a central bank, or the guarantee of very strong private institutions, commercial banks have not felt justified in putting more than a small part of their resources into Palestine investments; their primary obligation was to maintain such liquidity as might be required to meet the claims of their depositors. The Palestinian economy needed intermediate and long-term equity funds, not short-term "self-liquidating" loans. The Jewish Agency and the Histadruth have acted as suppliers (or guarantors) of some investment funds, but the Government of Palestine has appeared in this constructive role only on a very limited scale. What Government has not done, banks and other financial institutions were too weak to do on a large scale.

A general judgment of the achievement of Palestine's monetary and financial institutions must be based on an examination of the economic progress of the country and their contribution to that progress. Our criteria of economic progress are: (a) the rate of absorption of Jewish immigrants, (b) the reduction in the chronic underemployment of the Arab masses, (c) the rise in per capita income and (d) the increase in the long-term capacity to absorb immigrants, create fuller employment and raise income.

By these criteria, the period 1920-31 was one of very limited progress. In part this limited progress was due to difficulties of monetary policy which afflicted Britain as well as Palestine. It would be captious, long after the fact, to demand a greater monetary wisdom in administering the affairs of the colony than was displayed in those of the metropolis. However, beyond the unfortunate exchange level of sterling and the still more unfortunate relationship at which Palestinian and sterling prices were linked, the financial deficiencies of Palestine during those years must be charged to the fiscal account rather than (in the narrow sense) the monetary one. Resources were idle both in Palestine and Britain, but the United Kingdom Colonial Office took no initiative in mobilizing those resources for Palestinian development. Had an aggressive use been made of fiscal instruments of development, it might have been found advisable also to employ the monetary powers of the Palestine Currency Board. In default of any extensive employment of the larger instrument, the smaller also remained idle.

In broad outline, much the same judgment must be expressed on the efficacy of monetary and financial institutions in the years 1932-39. Monetary policy there was none. Only one limited monetary crisis occurred during the period. That was at the time of the "run" on banks experienced during the Italo-Ethiopian war, when the Palestine Currency Board might have rendered a service by operating as a central bank to maintain liquidity; the Board left this function to the big private banks. Throughout these 8 years of spectacular economic progress, the dynamic financial factor was Jewish capital import. Government might have helped the Jewish capital to go further and achieve more by itself assuming a considerable part of the responsibility for financing housing, irrigation and land purchase.* It cannot be argued that the British economy was so fully employed in those years that it lacked resources for capital export. But the Colonial Office interpreted its responsibilities in Palestine not as involving the furthering of a still more rapid economic progress but rather as calling for the dampening down of too rapid a growth and the furnishing of (not too efficient) police protection. Under these circumstances, the scope of monetary and financial activities undertaken by private and quasi-public institutions was as broad as possible.

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* E.g. by lending money to the Jewish National Fund and assisting Fellaheen to acquire title to land.

In war, too, monetary policy has necessarily been the handmaiden of fiscal policy. Both the profits and losses of Palestine from the war have been quite independent of the range of activities of her monetary and financial institutions. British war purchases, the high prices of her imports, a political policy of "going easy" on price control and tax evasion—these have been the dynamic factors in Palestine's acquisition of large sterling balances and an inflated price level. The inflated price level is the greatest immediate economic handicap with which Palestine enters the transition from war to peace. Yet, within the limits of her fiscal policy, there is nothing which a different monetary policy could have done about it. There remains the question as to whether this economic handicap should now be eliminated through a monetary readjustment. That question will be examined in Part IV below.

CHAPTER 20

INTERNATIONAL ECONOMIC RELATIONS

PREWAR BALANCE OF PAYMENTS

In view of Palestine's limited natural resources and the desire of the Jewish community to increase its numbers rapidly through development of modern agriculture and manufactures, international economic relations necessarily assumed a position of paramount importance in the economic development of the past quarter century. The most complete summary of these relations—although only in broad outline—is provided by the balance of international payments. The estimates of such payments for 1936 and 1939, shown in the following table, are typical of the prewar pattern:

PALESTINE'S BALANCE OF INTERNATIONAL PAYMENTS, 1936 AND 1939

(*Thousands of £P*)

	1936		*1939*	
	Payments received by Palestine	*Payments made by Palestine*	*Payments received by Palestine*	*Payments made by Palestine*
Merchandise:				
Exports	4,421		5,616	
Imports		12,762		14,564
Tourist expenditures	552	780		280 (net)
Interest and dividends	550	500		200 (net)
Individual remittances	1,300	1,000	200 (net)	
Government transactions	300 (net)		2,132	763
Other current transactions	100	270	100	300
TOTAL ON CURRENT ACCOUNT	7,223	15,312	8,048	16,107
Capital of immigrants and emigrants	6,556	1,000	7,750 (net)	
Capital of "national" and religious funds	1,200		2,500	
Capital flow in private securities, banking, and other funds	1,000	800	188 (net)	
Sale or purchase of currency	800 (net)			3,017 (net)
Gold and silver	251	157		427 (net)
TOTAL ON CAPITAL ACCOUNT	9,807	1,957	10,438	3,444
Residual	239		1,065	
TOTAL	17,269	17,269	19,551	19,551

Source: Adapted from reports of U. S. Consul in Jerusalem.

Among the striking features of this balance is the great importance of commodity trade. Palestine's total foreign trade was four times as great per capita, in the years of peace, as that of Syria and Iraq, three times as great per capita as that of Egypt. It was of the same order of magnitude per capita as the foreign trade of such advanced countries as the United Kingdom and Sweden.

Equally characteristic is the fact that Palestine's commodity imports have had a value very roughly three times as great as the value of her commodity exports. This so-called "unfavorable" balance of trade is the usual concomitant of rapid industrialization; such industrialization can be accomplished only by the importation of capital equipment. If concurrently agricultural production is also being expanded, as has been the case in Palestine, capital equipment for the farm must also be brought in from abroad. Moreover, foodstuffs, too, had to be imported in the case of Palestine, since the rise in population outpaced the expansion of general food production.* That Palestine during the prewar years was able continuously to import more than it exported made for rapid economic development and should be a source of encouragement rather than of fear.

The estimates given in the above balance also disclose that Palestine's service industries had not developed to the point where they made any substantial contribution to the financing of the excess of imports. Palestine—which is widely thought of as a tourist country—actually had a substantial excess of payments abroad, on account of tourists and travellers; this item amounted to a net outpayment of £P 228,000 in 1936 and £P 280,000 in 1939. Moreover—also contrary to general belief—Palestinians were not important net recipients of individual charity. Palestine's net receipts from individual remittances were only £P 300,000 in 1936 and £P 200,000 in 1939; Palestinian immigrants sent roughly three-quarters as much abroad as they received individually from abroad. Government transactions—particularly imperial defense expenditures—yielded an appreciable balance of inpayments, £P 1,369,000 in 1939. In 1936 Palestine also had a net income from abroad on account of interest and dividends of £P 50,000; by 1939, due both to further foreign investments in Palestine and to considerable sales of Palestine's holdings of foreign securities, this item was converted into a net debit of £P 200,000. Other current transactions. including insurance, royalties, port fees, commissions, etc., resulted in net outpayments of £P 170,000 in 1936 and £P 200,000 in 1939. Taken together, the current items in Palestine's balance of international payments showed a net deficit of £P 8.1 million in each of the peace years 1936 and 1939.

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* The considerable concentration of agricultural expansion in citri-culture meant more need for imports than would have resulted from a more diversified expansion.

The lower half of the table furnishes the explanation of the deficit on current account. It has been more than covered by the importation of capital. In the peace years 1923-39, Palestine bought about £P 115 million more of merchandise from foreign countries than she sold to them. Funds to pay for these imports were available because, in these same years, immigrants, Jewish national institutions, foreign companies, and others brought about £P 120 million to £P 125 million into the country.

It is an insufficiently causal statement, however, to say merely that Palestine paid for her excess of peacetime imports by importing capital. She had an excess of imports *because* she imported capital. Without the import of capital, Palestinians would not have had the purchasing power to buy so large a volume of imports, and imports would necessarily have been smaller. Apart from the capital of immigrants, Palestine had no large balances abroad that she could draw upon to pay for an excess of imports; nor, as shown above, did she have any net income from international services.

PEACETIME COMMERCIAL POLICY

The commercial policy of the period was not unrelated to the character and magnitude of the excess of imports. Apart from the general, and mistaken, uneasiness over the "adverse" balance of trade, Palestinians were concerned also with the retardation of their development caused by the international commercial policy pursued by the Mandatory Government.

Under Article 18 of the Mandate, it is stipulated that "the mandatory must see that there is no discrimination in Palestine . . . against goods originating in or destined for . . ." any State that is a member of the League of Nations. This stipulation was interpreted not only (as was its intent) to prohibit any special trade advantages to the State holding the Mandate but also to prohibit reciprocity treaties, special barter agreement, tariffs retaliating for discrimination against Palestine, and generally any device for giving less favorable treatment to countries which bought nothing from Palestine than to countries which bought a great deal. In the world of the 1930's, the power to buy was widely used as a lever to expand sales; the policy of the United Kingdom Colonial Office forbade Palestine to make use of this lever. Consequently it was possible, in the 4 years 1936-39 for Japan to sell Palestine £P 1,560,000 worth of goods while buying from Palestine only £P 48,000.

The weakness of Palestine's position—in following the straight and narrow path of multilateral trade while other nations were engaging in all kinds of bilateral discriminations against her—was commented upon by the Mandates Commission as far back as 1928. The literature of the 1930's is full of the same issue: annual reports of the Jewish Agency, complaints of trade groups, and even the recommendation of the Royal Commission of 1937—all availed nothing. The Royal Commission urged strongly (*Report,* p. 217) that the interpretation of Article 18 required revision. At a meeting of the Mandate Commission in 1938, the British Government representative was asked what was being done to remedy the situation resulting from interpretation of Article 18, and he replied that "This was a very thorny question," and that "the whole matter was under careful consideration." A year later, a member of the Mandate Commission observed that "The principle of commercial equality enshrined in the Mandate appeared in present conditions to be working to the detriment of the country." But the British representative had nothing to contribute concerning the removal of that detriment, except to say that the matter was "still under consideration." So, throughout the period of the Mandate, nothing has been done to use control over imports to expand Palestine's exports and protect them against discrimination.

Palestine has adhered to a general low tariff, non-protectionist policy. It has imposed a general schedule of a 12-percent ad valorem duty. Upon proof of cause and after approval by the Colonial Office in London, exceptions were granted which exempted certain raw materials from duty and afforded protection to selected agricultural and manufactured products. However, semi-processed materials, which are primary for much of Palestine's industry, remained subject to duty, and the clumsy system of drawbacks did not reduce this burden on export commodities. The effects of the exceptions were such that both Arab and Jewish economists (Himadeh and Horowitz) agreed that in the 1930's Palestine had one of the lowest customs tariffs in the world. This tariff policy was opposed by both Arab and Jewish interest groups with respect to agriculture and especially by the Jewish interests with respect to industry.

CHARACTER AND ORIGIN OF PEACETIME IMPORTS

During the years between the two wars, Palestinian imports were dominated by manufactured articles and food—not by raw materials. This generalization is, in broad perspective, almost as true of the later peace years, after the development of the 1930's, as it is of the early 1920's. A better indicator of the growth of manufactures would be the volume of semi-processed materials imported for further processing, but these are not clearly identifiable in the trade statistics, The total value of imports increased from an annual average of £P 6.0 million in the years 1923-27 to an average of £P 15.5 million in the years 1935-39. For the whole period, 1923-39, about 57 percent of Palestine's imports consisted of manufactured articles, 25 percent of food, drink and tobacco, 8 percent of raw materials, and 10 percent of miscellaneous and unclassified articles. Comparing the year 1923-27 with 1935-39, it is clear that there was some increase in the relative importance of raw materials imports; yet the increase was only from 7.6 percent in the earlier 5-year period to 8.9 percent in the latter. The relative importance of imports of the other two major classes—manufactures and foods—also showed no structural change.

The value of manufactures imported during the whole period 1923-39 was about £P 93.9 million. The 5 years 1923-27 averaged £P 3.9 million and the years 1935-39 averaged £P 8.7 million. A large, but not precisely determinable, part of the imports of manufactures consisted of producers goods—both for further processing and for construction and equipment. The commodities listed in the table below accounted for 60 percent of total imports of manufactures in the years 1936-39. Producers goods were very important among them.

PRINCIPAL MANUFACTURES IMPORTED INTO PALESTINE, 1936-39
(*Annual average value*)

Iron bars and girders	£P 270,629
Iron pipes, tubes, etc.	325,008
Iron sheets	86,432
Tin plate sheets	63,824
Cement	108,489
Wood for citrus cases	464,872
Printing and packing paper	197,444
Benzine, kerosene, and lubricating oil	498,321
Industrial machinery	618,790
Electric goods	347,182
Yarn: cotton, wool, and silk	£P 170,412
Cotton piece goods	265,552
Woolen tissues	192,166
Silk tissues	175,496
Apparel	431,640
Leather and hides	124,777
Motor cars and trucks	262,949
Parts and accessories for vehicles	86,461
Rubber tires and tubes	92,273
Drugs and medicines	114,360
TOTAL	£P 4,890,077

Source: *Statistical Abstract* (various years).

In the years 1923-39 Palestine imported a total of about £P 40.6 million of food. Food imports rose from an annual average of £P 1.6 million in 1923-27 to an annual average of £P 3.7 million in 1935-39. These food imports reflect both general deficiences in Palestine's agricultural output and the persistent adherence of the immigrants to a European (rather than Middle Eastern) diet. Particularly in their continued relatively high consumption of meat, fish, fruits other than citrus, and sugar, did the immigrants create a demand for imports which departed from the old Palestinian-Arab pattern.*

The following commodities accounted for 60 percent of Palestine's food imports in 1936-39:

PRINCIPAL FOODS IMPORTED INTO PALESTINE, 1936-39
(*Annual average*)

Rice	£P 211,050	Butter	£P 219,199
Wheat	344,815	Fish	173,235
Wheat flour	321,754	Fruits	239,000
Cattle	280,381	Sugar	233,944
Sheep and goats	188,967		
		TOTAL	£P 2,212,345

Source: *Statistical Abstract* (various years).

Imports of raw materials, which averaged £P 0.5 million in 1923-27 and £P 1.3 million in 1935-39, even in the years of their greatest importance did not account for more than 10 percent of total imports. Wood accounted for 26 percent of total raw-material imports; seeds, beans and nuts for extracting oil accounted for 23 percent, fuel oil for 17 percent, coal for 7 percent and asphalt for 6 percent. The crude petroleum which passed through the pipe line from Iraq to Haifa was merely a transit item. Until 1940 no refining was done at Haifa.

The origin of Palestine's imports was greatly affected by two factors: the imperial connection of the Mandatory Government and the provenance of Palestine's immigrants. The United Kingdom enjoyed no tariff preference in Palestinian markets, but the tendency of the Government of Palestine to look to Britain for supplies, and the whole framework of British monetary and trade connections, gave an advantage to British business. The United Kingdom was accordingly first among Palestine's suppliers. Germany, being in a position to insist that Jewish capital be exported only in the form of commodities, was second. Then came Syria, which was in a position (largely because of her more abundant rainfall) to supply Palestine with a great variety of off-season agricultural products. Fourth was the United States, as supplier of many manufactures, and fifth Rumania, principally because of her importance as a source of petroleum products, wood, meat and grains. No other country supplied as much as 5 percent of Palestine's imports.

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* The extent to which prewar imports of foodstuffs could be replaced by domestic production is discussed in Chapter 24.

For manufactured articles, the United Kingdom was the most important supplier, Germany and Austria second, and the United States third. The principal suppliers of food, drink, and tobacco were Syria, the British Empire, Egypt, Rumania and the United States. For raw materials, Rumania, the British dominions and colonies, Iran, Egypt and the United Kingdom were the important suppliers.

PERCENTAGE ORIGIN OF PALESTINE'S IMPORTS, 1936-39, EXCLUDING IMPORTS FOR RE-EXPORT

United Kingdom	16.4
Germany and Austria	15.3
Syria	9.2
U.S.A.	9.0
Rumania	8.7
Egypt	3.8
Poland	3.4
Japan	2.8
Belgium	2.8
Czechoslovakia	2.7
All other	25.9
TOTAL	100.0

Source: *Statistical Abstract* (various years).

CHARACTER AND DESTINATION OF PEACETIME EXPORTS

The composition of Palestine's exports during the years between World War I and World War II reveals her inability to compete in world agriculture markets for any other commodity than citrus fruits and her inability to compete in world markets for manufactures outside of chemicals and a few minor products. In the years 1923-39 the total value of her commodity exports (including re-exports) was £P 50.3. This total reflected a rise from an annual average of £P 1.6 million in 1923-27 to an average of £P 5.3 million in 1935-39. Over the whole period, food exports accounted for 82 percent of the total, manufactures for 14 percent, and raw materials for 4 percent. The increased importance of citrus in the 1930's depressed the percentage share of other exports; otherwise, before World War II, the export picture showed growth but no major structural shift.

In the years of peace, about four-fifths of the value of Palestine's exports consisted of citrus fruits and citrus products. Other agricultural exports—chiefly olive oil, other oils, and small amounts of grains—accounted for only 2 percent of total exports. Citrus exports, in cases, increased from 1,519,000 in 1925-26 to 15,265,000 in 1938-39 and, in value, from £P 468,000 to £P 4,356,000 over the same period. Palestinian producers were confident of their ability to meet the competition of other countries, but they were acutely conscious of the dependence of their opportunity to expand citrus exports on higher world incomes and an increasing importance of citrus in world diets. The Citrus Advertising Committee of the Palestine Government, therefore, concentrated on increasing total demand and advertising the merits of Palestinian citrus. Western Europe—particularly the United Kingdom, Holland, Belgium and France—constituted Palestine's export citrus market. In 1939 the United Kingdom bought 61 percent of Palestine's oranges exported in cases, Holland bought 12 percent and Belgium 7 percent. At the same time, the U.K. took 48 percent of Palestine's grapefruit, France 15 percent, and Belgium 12 percent.

In value terms, Palestine's peacetime exports of manufactures have been only about one-sixth as large as her food exports. The peacetime peak in exports of manufactures was reached in 1939, with the modest total of £P 765,000, accounting for about 14 percent of total commodity exports. In the years 1936-39, exports of potash accounted for 41 percent of total manufactured goods sold abroad and bromine for an additional 7 percent. The following principal manufactured commodities exported in the years 1936-39 accounted for over 85 percent of the total value of manufactures exported.

PRINCIPAL MANUFACTURES EXPORTED FROM PALESTINE, 1936-39
(*Annual average value*)

Potash	£P 243,417
Bromine	40,409
Soap	59,544
Essences and perfumery	12,450
Paper and cardboard goods	12,783
Books	18,364
Artificial teeth	£P 30,717
Cotton yarn and thread	26,406
Cotton piece goods	8,766
Cotton other goods	6,256
Silk tissues	7,130
Wearing apparel	44,111
TOTAL	510,363

Source: *Statistical Abstract* (various years).

Palestinian exports of raw materials averaged only £P 226,000 in the years 1936-39. The only commodity classes that accounted for annual average exports of over £P 10,000 were hides and skins (£P 111,360) and intestines (£P 19,212).

The United Kingdom (since it accounted for so large a share of Palestine's citrus exports) was by far the most important peacetime Palestinian export market; in the years 1936-39, she bought 51 percent of Palestine's exports. Second was Syria with 9 percent; she was Palestine's most important foreign customer for yarns, tissues, and apparel. Third was Holland with 7 percent, and fourth Belgium with 4 percent. The U.S.A. was twelfth with 1.6 percent. The industrialized countries of northern and western Europe (from Germany through the British Isles) accounted for three-quarters of the markets.

Thus, although geographically Palestine may be regarded as a land bridge connecting three continents, economically it has been bound, at least between the wars, primarily to Europe and only by a bridge of ships. A confirmation in the negative is found in Palestine's trade relations with the Middle East.

PALESTINE IN PEACETIME MIDDLE EAST TRADE

The Middle East was not of the first order of importance to Palestine, either as a supplier or a market, in peacetime. In the years 1936-39, the Middle East countries (Egypt, Turkey, Syria, Iraq and Iran) furnished only 20 percent of Palestine's imports and purchased only 12 percent of her exports. Palestine did not have less trade with other Middle East countries than they had with one another; she had much more. The Middle East countries were all exporters of agricultural produce and importers of manufactured commodities; they had very little with which to supply one another. Their imports consisted of cheap yarns and textiles, iron and steel manufactures, machinery, fertilizers, coal, coffee, tea and sugar; none of them were important producers of these commodities. Egypt exported her cotton, Turkey her tobacco, Iraq her petroleum, as Palestine her citrus—to world markets, not to the Middle East.

Palestine furnished something of a market to Middle East countries because of her heavy food imports and her developing manufactures. Per capita imports into Palestine were more than three times as great as imports into Egypt, Iraq or Syria. During the years 1936-39 Palestine imported a total of £P 9.6 million from the other Middle East countries, but she exported only £P 2.5 million to them. Trade between Palestine and Syria was particularly important, Syria selling Palestine £P 5,146,000 worth of goods in those 4 years and buying £P 1,738,000. In 1938, Palestine bought 29 percent of Syria's total exports. The importation of eggs, fruits and vegetables from Syria, although it aroused the opposition of some Palestinians, was largely confined to Palestine's off-seasons and thus complemented its own production. Nevertheless, a new agreement for the regulation of Palestine-Syria trade was reached at the end of 1939; its consequences have been overshadowed by war influences.

Underestimating the flexibility in the choice of routes resulting from modern methods of transportation and communication, some have thought that Palestine must have a great economic future merely because of her geographical position. No expectation could be more illusory. The Palestinian coastal plain is not an inevitable line of transport from Africa to Asia; even in ancient days an alternative route ran through Transjordan. Now motor roads can cross the desert. Ships have their choice of ports. Airplanes can fly over Palestine. Petroleum pipelines can be laid along many alternative routes. Transit trade tends to follow other trade. Palestine will become a great hub of international transit and communications only if she is a great center of other economic activity.

Moreover, transit trade in itself is rarely a great source of employment when it is entirely divorced from processing. In the years 1936-39 an annual average of about 1,940,000 tons of crude oil passed through the pipeline and out via the port of Haifa. Even at the fixed nominal value of 16 shillings per ton, this oil was worth an average of £P 1,550,000 per year. Yet this large export provided employment in Palestine for only a few hundred people. Only since 1940,* when refining has been added to mere transit, has petroleum made any substantial contribution to the national income of Palestine.

Apart from petroleum, peacetime transit trade through Palestine reached its maximum in the years 1935 and 1937, when it was about £P 825,000. The opening, in 1934, of the trans-desert motor route to Iraq and Iran contributed to the peaks reached in later years. But the 1937 level was not sustained. The value of transit trade other than petroleum fell to £P 672,000 in 1938 and £P 550,000 in 1939. At the outbreak of World War II, Palestine's international economic relations focused towards the British Isles and the industrial centers of western Europe, not toward the Middle East.

FLOW OF CAPITAL, 1919-1939

Capital importation not only made possible a large volume of imports, as previously explained, but it also constituted the source of all net capital formation. The domestic Palestinian economy made no net savings. Indeed in most years the Palestinian economy dis-saved on a substantial scale; i.e., its net investment was less than its capital import. A part of the capital imported was used for current goods and services.

Precise figures are lacking, but we estimate that over the years 1919-39, the total capital imported was of the order of magnitude of £P 130 million. About one-third of this imported capital seems to have been consumed in the transitional current expenses of immigrants, in social services, and for other current expenditures. About two-thirds of the imported capital was invested in industry, agriculture, housing, public construction and other investment goods. It must be emphasized that these estimates lack a wholly satisfactory statistical basis. They are broad judgments based on such statistical evidence as is available.

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* And earlier in the construction of the refinery.

The following gives a summary statement of the inflow of capital into Palestine during the prewar years.

CAPITAL FLOW INTO PALESTINE, 1919-39
(Millions of £P)

	1919-39
Immigrants	75
Jewish funds	20
Christian and Moslem funds	6
Foreign investments	28
TOTAL	129

Source: See the notes to this chapter.

Capital brought in by immigrants, accounting for three-fifths of the total, reached a peak of £P 10 million in 1935, the year of greatest total immigration and a year in which immigrants came dominantly from central Europe. In subsequent years, the imposition of the "political high level" principle of immigration policy, and the increased severity of restrictions on the export of capital from Germany, greatly reduced the inflow of capital from this source. On the other hand, foreign investments in the Consolidated Refineries, Palestine Electric, Palestine Potash, Nesher Cement, etc., increased in the late 1930's. Moreover during those years foreign insurance companies, banks, and industrial branches also increased their operations in Palestine. The source of funds which has remained most stable—and has accounted for 15 percent of the total—has been the Jewish national institutions.

Perhaps the most remarkable feature of these capital imports has been the relatively small proportion, some 20 per cent, due to private foreign investments. Thus, Palestine's development has taken place without incurring heavy interest charges on foreign debts or the obligation of repaying the funds borrowed. This is a unique experience for a country that bases its capital expansion on capital imports.

In addition to the capital which they brought into Palestine, many immigrants—and other Palestinian individuals and companies—held some assets abroad. According to an official estimate for 1939, banks, individuals and companies held assets abroad, either in the form of sterling securities or bank balances, amounting to £P 12.6 million.

THE PREWAR PATTERN

In the period between the two world wars, the pattern of Palestine's international economic relations may be summarized as a substantial excess of commodity imports over exports made possible by equally substantial capital imports, 80 per cent of which have not required any payment of interest or refunding of principal. Her imports have consisted primarily of processed foods and a diversified list of manufactures. Palestine's exports, on the other hand, were characterized by extreme concentration on a single commodity, citrus fruit. The raw fruit and manufactures based on citrus fruit accounted for four-fifths of her total exports. Similarly concentrated were her export markets, partly caused by a commercial policy which refused to use control over Palestine's imports as an instrument for assuring equal treatment for her exports. Also typical of the period was the fact that her merchandise trade, her capital imports, her tourist services, her seagoing shipping, her insurance services, her monetary and banking connections—all bound her more intimately to Britain, western Europe, and North America than to her immediate neighbors.

Not unexpectedly the exigencies of the war altered—temporarily or otherwise—several important essentials of this prewar pattern.

BALANCE OF PAYMENTS IN WARTIME

Although the wartime balance of payments rose to a greatly higher total value of transactions, it showed some basic similarities of structure to the prewar balance. The table on the next page gives a summary balance for two war years.

As the table indicates, the war economy developed an even greater excess of merchandise imports than prevailed during peace. This gap was made possible by the sterling expenditures of the British armies. These military expenditures covered the excess of imports and made possible substantial savings in currency and in balances held abroad. "Tourist" soldiers for the first time gave Palestine a net income on tourist account, and the accumulation of balances abroad brought a substantial net income from interest and dividends. Individual remittances from Palestine (to central and eastern Europe) were cut off, but individual remittances to Palestine (principally from the United States and the British Empire) were relatively well sustained. On the capital side, the funds made available by Jewish and other institutions rose to an unprecedented height. By these means, Palestine was able to sustain a large excess of merchandise imports and yet add about £ 100 million to her sterling balances in the United Kingdom.

As in the prewar period, the conditions of trade had a highly significant bearing on the volume and character of Palestine's foreign trade in the war years.

PALESTINE'S BALANCE OF INTERNATIONAL PAYMENTS, 1940 AND 1942
(Thousands of £P)

	1940		*1942*	
	Payments received by Palestine	*Payments made by Palestine*	*Payments received by Palestine*	*Payments made by Palestine*
Merchandise:				
Exports	4,400		4,439*	
Imports		13,309		20,765
Tourist expenditures	200 (net)		800 (net)	
Interest and dividends	100 (net)		800 (net)	
Individual remittances	500		700	
Government transactions	2,900	1,200	1,461 (net)	
Other current transactions		300 (net)	300	400
TOTAL ON CURRENT ACCOUNT	8,100	14,809	8,500	21,165
Capital of immigrants and emigrants	2,650 (net)		1,000	
Capital of "national" and religious funds	2,200		4,000	
Capital flow in private securities, banking, and other funds		1,900 (net)		8,567 (net)
Sale or purchase of currency		2,200 (net)		10,196 (net)
Gold and silver			27	
Military expenditures	5,500		26,000	
TOTAL ON CAPITAL ACCOUNT	10,350	4,100	31,027	18,763
Residual	740		401	
TOTAL	19,190	19,190	39,928	39,928

Source: G. E. Wood, *Survey of National Income in Palestine*, pp. 40-41. *Excludes exports of petroleum.

WARTIME CONTROLS OVER INTERNATIONAL TRADE

Immediately after the outbreak of war, comprehensive exchange control was established in Palestine. The Government assumed authority to declare any commodity essential and to take special steps to assure adequate importation (and controlled use) of such commodities. Control over imports was tightened gradually throughout 1940, with the aim principally of conserving free exchange by diverting imports to the sterling area. In July 1941—after the passage of the Lend-Lease Act and the accentuation of shipping losses—the pivot of import control was shifted from conservation of exchange to conservation of shipping. The Middle East Supply Center, with headquarters at Cairo, was created to minimize and rationalize the use of shipping and to secure maximum production in the Middle East to meet regional needs.

To carry out the shipping conservation policy, in mid-1941 a list of approximately 200 non-essential items was established for which no import licenses would be granted unless they could be obtained from neighboring countries. Quantititive restrictions were placed on imports of other items, particularly items of great bulk. Government control tightened continually till in mid-1942 imports were divided into three classes: (a) commodities that could not be imported from overseas, (b) commodities imported on Government account or through a single importer designated by the Government, (c) commodities that could be imported from overseas within quota limits. Commodities classified as (a) could be imported only from the Middle East and British East African dependencies; they included most foods other than cereals, silk, flax, oil and oil products. The (b) group, under the tightest Government procurement, included cereals, fertilizers, rubber, coal, base metals and metal manufactures, industrial chemicals, etc. Class (c), in which there was the maximum latitude for private procurement from overseas, included textiles, paper, some foods and pharmaceuticals. In all cases, applications for import licenses were required to show that the commodities to be imported were required for direct war production or essential civilian supply.

Toward the end of 1942 the Government instituted a tender system for import licenses, with the object of reducing the price level. This system was extended to a wide variety of commodities and had the effect of concentrating trade in the hands of a selected group of importers. Only in 1945, with the easing of the shipping shortage, was there a beginning in the return to prewar trade methods and a decrease in the concentration of import trade.

Control obviously was also extended to exports. Immediately after the outbreak of war, an ordinance was issued prohibiting the export (except to Transjordan) of a large number of commodities, except under specific license. These controlled commodities included all foods other than citrus, hides and skins, chemicals and drugs, raw wool and woolen and worsted yarn, glass bottles, and several other commodities. Gradually, in 1940, all exports were placed under the licensing system. Exports were also submitted to the general control over shipping administered by the Middle East Supply Center.

IMPORTS IN WORLD WAR II

Under this control system, the money value of Palestinian imports rose to levels greatly exceeding peacetime peaks, but the physical volume of imports remained greatly below peacetime levels. The total £P value of imports showed the following movement:

VALUE OF PALESTINIAN IMPORTS*, 1939-44
(*Millions of £P*)

	1939	*1940*	*1941*	*1942*	*1943*	*1944*
Value	14.6	12.6	13.3	21.4	27.2	36.2

Source: *General Bulletin* and supplements. *Including imports of petroleum, certain chemicals and rubber manufactures.

The rise in value between 1942 and 1943 is due in large part to an arbitrary tripling of the value per ton assigned to petroleum imports from Iraq.

For the years 1941, 1942, and 1943, the Government of Palestine has published an analysis showing the degree to which this increase in nominal value was accompanied by a decline in real volume. For 1944 we have computed our own indexes, using the same statistical method as the Government.

INDEXES OF VALUE AND VOLUME OF IMPORTS,* 1939-43

	Index of imports in current prices, 1939=100			*Index of volume of imports, 1939=100*		
Class	*1942*	*1943*	*1944*	*1942*	*1943*	*1944*
Food, drink and tobacco	188	266	380	83	71	90
Raw materials and articles mainly unmanufactured	253	224	318	105	83	104
Articles wholly or mainly manufactured	103	70	94	42	20	23
Animals, living, n.e.s.	965	1,088	421	586	372	113
Total merchandise	142	140	194	60	41	50

Source: *General Bulletin*, February 1945. *Excluding petroleum and rough diamonds.

As this table indicates, while imports, excluding petroleum and rough diamonds, nearly doubled in £P value between 1939 and 1944, they declined by one-half in volume. In 1943 the decline in volume was as much as 59 percent. At the same time population had increased by 12 percent.

The great wartime decline in imports was concentrated in "articles mainly or wholly manufactured." These articles came to Palestine, in peace years, from overseas industrial countries—in substantial part from countries which, by 1941, were occupied by the enemy and, for the rest, from countries whose industrial capacity was taxed to meet the war needs of the United Nations. It was the shutting off of these manufactured imports that gave Palestinian industry its great opportunity to capture the home market. In 1942 imports of manufactures were only 42 percent as great, in real volume, as in 1939, and by 1943 they had declined to 20 percent of the 1939 level. They remained at about this level even after the reopening of the Mediterranean in 1944. The development of Palestinian manufactures can be followed clearly, for example, in the record of imports of apparel, textiles and textile materials. The more finished levels disappeared successively from the import picture until, in 1943 and 1944, imports of piece goods dropped sharply, while Palestine continued to expand her imports of raw textile fibers and yarns and her production of finished textiles and apparel.

As a concomitant of this increased industrialization, raw materials imports increased. Greater quantities of raw cotton, hides and skins were imported to permit increased manufacture of clothing and shoes. Imports of crude oil via the Iraq pipelines increased from 1,812,000 tons in 1939 to 2,053,000 in 1942 and 3,364,000 in 1944. During the war years, the oil has not merely passed through the country; it has been refined at Haifa. Imports of raw diamonds rose from a negligible quantity in 1939 to £P 379,000 in 1942 and £P 1,522,000 in 1944. Eliminating price changes (for raw material prices rose more than others), the share of raw materials in total real imports rose from 10 percent in 1939 to over 15 percent in 1942 and 1944.

Imports of foods have declined along with, though not so drastically as, imports of manufactures. In terms of 1939 prices, the total value of food, drink and tobacco imported into Palestine has been evaluated by the Palestine Government at £P 3,756,000 in 1939, about £P 3,117,000 in 1942, and about £P 3,380,000 in 1944. Detailed comparison of war and prewar food imports reveals sharp declines in grains, flour, poultry, butter, cheese, eggs, fish and potatoes. Real hardship was imposed on consumers, and farmers were encouraged to attempt to replace the eliminated imports.

The great structural change in the composition of Palestine's imports, and the drive to conserve shipping, meant a revolution in her sources of supply. That revolution is indicated in the following table:

PERCENT DISTRIBUTION OF PALESTINE'S IMPORTS, BY COUNTRY OF ORIGIN, SELECTED YEARS, 1936-44

	Percent of total imports		
Country or region	*1936-39*	*1941*	*1944*
United Kingdom	16.0	27.2	8.1
Other Europe west of Rhine	6.2	.0	.0
Subtotal	22.2	27.2	8.1
Germany and Austria	14.6	.0	.0
Other Europe east of Rhine	21.3	.0	.0
Subtotal	35.9	.0	.0
Syria	9.0	3.0	3.9
Egypt	3.7	11.9	5.8
Transjordan	2.7	4.4	4.0
Iraq	1.6	10.1	32.2
Iran	1.3	.6	.5
Turkey	1.2	2.1	6.3
Middle East subtotal	19.5	32.1	52.7
U.S.A.	8.8	8.7	8.6
Australia and New Zealand		9.1	3.5
India		6.1	6.3
Union of South Africa		2.0	5.0
Canada		1.2	5.4
Other British Empire		6.2	7.4
British Empire subtotal	5.1	24.6	27.6
All others	8.5	7.4	3.0
TOTAL	100.0	100.0	100.0

Sources: *Statistical Abstract*, various years, and *General Bulletin*, supplement, February 1945.

In the transition from the prewar pattern of suppliers, 1941 is a half-way house. In 1941 the European continent had been displaced, but the United Kingdom was still important; this was also true of India, the British dominions and the African colonies. In 1944 the Middle East had emerged clearly as the major source of supply, with crude petroleum accounting for about half of the imports from this region. While the United Kingdom was reduced to a minor supplier, India and the dominions became major sources of supplies. Having given up most of her imports of manufactures and much of her imports of food, Palestine was able to concentrate most of her sources of supply in the Middle East and in neighboring Asia and Africa.

EXPORTS IN WORLD WAR II

A similar revolutionary change has taken place in the composition of Palestinian exports and in the markets for those exports. As has been related above, the war and the shipping shortage wiped out Palestine's greatest export, that of unprocessed citrus fruit. In the 1938-39 season, Palestine exported 15,265,000 cases of citrus, valued at £P 4,356,000. This was equal to 80 percent of the total value of Palestine's exports (including reexports) in 1939. In the 1939-40 season Palestine could still export 7,590,000 cases, valued at £P 1,918,000. But in 1940-41 exports in cases fell to 78,000, valued at £P 24,000; in 1941-42 they were 34,000 cases, valued at £P 16,000. In these later years there were some increases in exports of citrus in bulk, over £P 54,000 worth being exported in this form in 1942 and nearly £P 200,000 worth in 1943. There was some recovery in 1944 when total exports of citrus fruit amounted to £P 1,500,000. Moreover, the manufacture of fruit juices made great progress; from an average of £P 12,800 in 1936-39, exports of fruit juices rose to a value of £P 89,000 in 1942 and about £P 150,000 in 1944. In spite of these facts, it is broadly true that the war, and the resulting shipping shortage, destroyed over 90 percent of the export value of Palestine's citrus crop prior to 1944.

The wartime course of Palestine's exports is, therefore, all the more remarkable a tribute to her economic adaptability. While her exports declined in 1940 and 1941, they rose beginning with 1942 to levels far above prewar peaks, as indicated by the following totals:

VALUE OF PALESTINE EXPORTS, 1939-44
(Millions of £P)

	1939	*1940*	*1941*	*1942*	*1943*	*1944*
Value	5.1	4.1	4.2	8.7	12.8	14.6

Source: *General Bulletin* and supplement.

Petroleum, which had previously been only a transit item, was exported in 1944 in refined form, to a total value estimated to be about £P 4.5 million. The export of polished diamonds, negligible in the prewar period, rose to £P 3.2 million in 1944. Exports of potash and bromine, which together averaged about £P 284,000 in the years 1936-39, had about quadrupled their prewar level by 1943. Moreover—and this is perhaps important for the long run—a group of miscellaneous manufactures that accounted for only about £P 530,000 of exports in 1938 had risen to a total of about £P 3,500,000 in 1944. Their particular significance has been noted in an earlier chapter.*

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* Supra, Chapter 15, *Manufactures Today.*

These latter gains, moreover, involved a considerable increase in physical volume.

EXPORTS FROM PALESTINE IN 1939 AND 1943*

	Value of exports 1939	*Estimated value of exports in 1943 expressed in 1939 export prices*	*Index of estimated volume of exports in 1943 (1939=100)*
Food, beverages, and tobacco, including citrus	£P 4,191,674	£P 239,531	6
Food, beverages, and tobacco, excluding citrus	380,709	127,383	33
Raw materials and articles mainly unmanufactured	159,484	694,688	436
Articles wholly or mainly manufactured	765,255	1,522,455	199
Miscellaneous and unclassified	1,356	60	4
Total including citrus	5,117,769	2,456,734	48
Total excluding citrus	1,306,804	2,344,586	179

Source: Adapted from special memorandum prepared by the Economic Bureau of the Jewish Agency. *Excludes exports of petroleum products.

Thus, the export of Dead Sea chemicals and a variety of miscellaneous manufactures nearly doubled in volume between 1939 and 1943. Even more impressive is the fact that the export of manufactured articles other than Dead Sea chemicals achieved even a greater expansion of volume as expressed by an index of 216. The very large increase in raw materials and articles mainly unmanufactured is explained by the development of the diamond cutting and polishing industry.

This great shift in the composition of Palestine's exports, away from citrus and towards differentiated manufactures, has meant a shift in markets away from the United Kingdom and western Europe and towards the Middle East. The latter tendency has been reenforced by the shipment of petroleum to United Nations armies in the neighboring area. Only the strategic Dead Sea chemicals and polished diamonds (the latter going 90 percent to the United States in 1943 and 70 per cent in 1944) have retained their hold on the wider world markets. The table on p. 336 shows the wartime revolution in the destination of exports, corresponding to the change in the origin of imports discussed earlier.

It is clear that, by 1941, western Europe and the British Isles had lost their old position as Palestine's chief markets; that position would surely not be restored until the citrus exports were resumed, and petroleum exports flowed to users in Europe rather than to the United Nations armies in the Middle East. Russia had emerged as a customer by 1943, and the United States had become a much more important customer—though only for diamonds. The Middle East (including, it must be reemphasized, the military consumers of petroleum) bought almost two-thirds of Palestine's exports—or about £P 8.3 million worth. The Middle East bought about 82 percent (£P 2.6 million worth) of the diversified manufactured exports described above. And while this £P 2.6 million still amounted to only about three-fifths of the exchange that Palestine had formerly derived from her exports of unprocessed citrus fruits, Palestinians placed great weight upon it as a signpost that Palestine has a future not only in the export of citrus, refined petroleum, Dead Sea chemicals and polished diamonds, but also in the export—particularly to Middle East markets—of a more diversified group of manufactures. This belief found support in the export statistics for 1944.

DESTINATION OF PALESTINE'S EXPORTS, 1936-44

Country or region	*Percent of total exports* *1936-39*	 *1941*	 *1943*	 *1944*
United Kingdom	51.2	17.1	8.0	14.9
Other Europe west of Rhine	18.2	.0	.0	.0
Subtotal	69.4	17.1	8.0	14.9
Europe east of Rhine	11.6	.0	1.6	.3
Syria	9.0	18.5	10.3	8.9
Egypt	1.8	42.5	33.7	30.1
Other Middle East	1.3	4.2	21.3	16.8
Subtotal	12.1	65.2	65.3	55.8
United States	1.6	3.4	18.3	16.3
All other	5.3	14.3	6.8	12.7
TOTAL	100.0	100.0	100.0	100.0

Sources: *Statistical Abstract,* various years.

CAPITAL FLOW IN WORLD WAR II

During 5 war years, 1939-44, Palestine imported about £P 25 million of capital through contributions to the Jewish National Funds and by drawing upon previously established foreign assets. But the basic characteristic of the war development was not the import of capital but its export. During the war years Palestine saved on an enormous scale—partly through real saving by tightening her belt and partly through negative savings resulting from the inability to maintain inventories and equipment. She made the real resources released by these savings available to British military forces, and she accepted sterling balances in exchange—sterling balances which are "blocked" subject to the provisions of United Kingdom exchange control.

Though the exact figure is secret, there is reason to believe that by the end of 1944 Palestinian sterling balances amounted to £ 110 to 115 million. Nearly £ 50 million was accounted for by the balances of the Currency Board and other Government funds. This £ 110 to 115 million was more than three times as large as the prewar value of Palestine's national income; it was about equal to the magnitude of Palestine's national income in 1944. In addition to these large sterling assets, early in 1944 Palestine was estimated to have a minimum of $15 million of assets in the United States. During the early months of 1945, Palestine's sterling assets continued to rise by about £ 1.5 million per month.

EFFECTS OF THE WAR

Thus the war wrought profound changes in Palestine's international economic position which reflect, of course, the profound changes in her entire economy. The shipping shortage killed her exports of citrus. Yet, so great was the resilience and adaptability of her economy, that by 1943 she had built up a new and greater export trade, taking advantage of precisely that shipping shortage which had dealt her the initial blow. For the export of citrus fruits, which could not be shipped to distant markets because of their great bulk, she had substituted by 1943 other goods of smaller bulk or commodities needed by nearer countries. Smallest in bulk was the new export of gem diamonds. Bulky, but needed by the Middle East armed forces, was her export of refined petroleum. Also essential to the war effort in overseas countries were bulky strategic chemicals such as potash and bromine. Of greatest significance were several million £P's of diversified manufactures, which found a new prominence in her exports. By these means, Palestine's exports grew from £P 5.1 million in 1939 to £P 14.6 million in 1944, despite the drastic curtailment of her greatest peacetime export. By 1943 the Middle East was buying almost two-thirds of Palestine's exports, and supplying nearly three-fifths of her imports. Being debarred from bulky manufactures and processed foods from overseas, Palestine shifted her imports toward raw materials and unprocessed foods.

The war did not eliminate Palestine's traditional excess of imports. However, the equally traditional role of immigrants' capital in financing this excess was taken up—on a greater scale—by the United Nations armies. The payments of the military forces in the Middle East area enabled Palestine to support a continuous excess of imports and yet to accumulate substantial balances, which she hopes to use for postwar development.

CHAPTER 21

PUBLIC AND QUASI-PUBLIC FINANCE

GOVERNMENT RECEIPTS AND EXPENDITURES

In the past quarter century, most national treasuries have lived, at least for many years, in the adventurous, trying and controversial world of deficits and deficit financing. Not so the Government of Palestine: it has enjoyed the safety, comfort and conventional good repute that go with a budgetary surplus. From one point of view, Palestine may have had a more serious deficit than many countries with less conventionally tidy financial statements—a deficit in development works not attempted and in social services not provided, a deficit in a lower level of national income and a lower quality of popular culture than would have been attainable with another fiscal policy: that is not, however, the kind of deficit that appears in financial accounts.

RECEIPTS, EXPENDITURES AND SURPLUS OF PALESTINE GOVERNMENT, 1920-44

(*Thousands of £P*)

	Receipts	*Expenditures*	*Cumulative surplus*
July 1, 1920-March 31, 1924	6,994	6,748	246
April 1, 1924-March 31, 1929	12,271	11,767	749
April 1, 1929-March 31, 1934	14,174	12,413	2,511
April 1, 1934-March 31, 1939	26,699	26,530	2,533*
April 1, 1939-March 31, 1944	43,901	45,991	652
TOTAL	104,039	103,450	652*

Source: Government of Palestine, *Report on the Accounts and Finances . . .*, Jerusalem, 1944. Figures are not entirely comparable over the years; a major change took place in 1929, when railroad expenditures were shifted from a gross to a net basis. * Includes adjustment for depreciation or appreciation of investments. (Due to rounding subtotals do not necessarily agree with totals exactly).

The above table does not include receipts or expenditures from the proceeds of Palestine's one public loan. In 1927 the Government of Palestine issued a 5 percent sterling loan of £ 4,475,000 (1942-67), fully guaranteed as to principal and interest by the British Treasury. This loan was used principally for the purchase of the railroad system and further railroad, harbor, telephone and telegraph development. All subsequent capital outlays have been financed out of current receipts. In 1942 the 1927 loan was in part converted into a 3 percent fully-guaranteed sterling loan (1962-67) and in part retired. The converted portion amounted to £ 3,600,000. The repayment of the loan on November 1, 1967 is provided for by a sinking fund in the hands of trustees appointed by the British Treasury. The Government of Palestine makes payments into this sinking fund twice a year. This £ 3,600,000 is the total public debt of Palestine. It amounts to 4 percent of Palestine's National Income in 1943 and to less than 10 percent of the sterling reserve held on March 31, 1944 by the Palestine Currency Board.

The financial position of the Government of Palestine is, however, even stronger than is suggested by the above data on her receipts, expenditures and public debt. On March 31, 1944 the Palestine Treasury held sterling investments worth £P 6,208,000 and Palestinian obligations worth £P 2,819,000. The sterling investments were in securities of the British Treasury, British municipalities and British dominions. The Palestinian assets were obligations of local authorities, citrus growers, banks, railroads, etc. (All loans to Palestinian borrowers are treated as expenditures in the Palestine accounts; when recovered, they are not deducted from expenditures but are added to receipts.)

The Palestine Treasury has liabilities against a large part of her foreign investments, but some of these liabilities are very remote and contingent. There are specific investments of £P 1,015,000 for a number of special funds (Archeological Museum, Post Office Savings, Renewals funds, etc.), which may be said to be fully obligated. There are also, however, liabilities of £P 1,925,000 to the Custodian of Enemy Property, £P 811,000 for the balances of the War Risks Insurance scheme, £P 128,000 for Lend-Lease, etc., which may create substantial assets disposable by the Palestine Government.

The cash requirements of the Government of Palestine expanded very much under war pressures. On March 31, 1944 the Treasury had outstanding current advances of £P 2,026,000 for various Government activities more or less directly related to war supply. In most developed countries such advances would be financed with Treasury Bills,—and Palestine bankers profess their interest in buying such bills. However, Treasury bills have not been offered. Nor, during the fiscal year 1943-44, did the Government of Palestine provide funds for working balances by selling any of its sterling securities. Instead it borrowed from the Joint Colonial Fund. Due to the choice of this method of financing, the balance of the Palestine Government with the Joint Colonial Fund was converted from a credit of £P 1,717,000 on March 31, 1943 to a debit of £P 1,815,000 on March 31, 1944. This debit balance is not included in the official statement of the public debt.

The strong financial position of the Palestine Treasury is not due to financial assistance from the British Treasury. Apart from its guarantee of the 1927 loan and the 1942 refunding, which have cost the British Treasury nothing, Britain's financial assistance to Palestinian development has been negligible. Palestine does owe much to Britain for her services in defense against Axis aggression, but in this respect Palestine's obligation is at least equally great to the United States and Soviet Russia for their larger role in the defeat of the Axis.

Grants to Palestine from the imperial Colonial Development Fund through March 31, 1944 totalled only £P 95,000; grants for development from other funds have been very small.* The larger British grants to Palestine have been entirely for military and security purposes falling within the traditional area of "imperial expenditure". Far from receiving funds for its own development from these grants, Palestine has made expenditures out of her own resources which involve a net contribution to imperial defense and security.

In the two fiscal years 1922-24 alone, Palestine received grants of £P 524,818, but these funds were devoted entirely to the Transjordan Frontier Force. From 1924 through the fiscal year 1938 Palestine received grants for defense and security purposes of £P 1,701,226. She expended a total of £P 12,764,763 on these purposes (budgetary items: Defense, Police and Prisons, Transjordan Frontier Force, British and Palestinian Gendarmerie), leaving £P 11,063,447 to be met by the Palestinian taxpayer after utilizing the British grants. It seems clear that in those years Palestine met all her security expenditures that could properly be regarded as local and also made some contribution to general imperial defense. This view seems to have been shared by responsible British opinion since in 1938-39 the British Parliament reduced Palestine's contribution to the Transjordan Frontier Force to one-quarter (£P 43,000) and stipulated that Palestine should henceforth pay only for her own police (£P 525,000 in 1935-36) and not for general imperial security and defense. This British commitment to meet all imperial defense expenditure resulted in large grants-in-aid during the early war years. Later, however, a new formula was established whereby the magnitude of defense grants-in-aid was made dependent primarily on the size of Palestine's general revenue balance. Under this formula, Palestine taxpayers again made a financial contribution to imperial defense.

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* At the end of 1944, the U. K. Colonial Minister gave the total of all development grants as £P 192,000.

The following table gives the annual amount of grants-in-aid during the war years as foreseen in the Estimates of Palestine Treasurer and as actually received from the British Treasury.

ESTIMATED AND ACTUAL PALESTINE GRANTS-IN-AID

Fiscal period	*Estimates of the Palestine Treasury*	*Grants-in-aid actually received* *
1939-40	£P 2,307,250	£P 2,131,544
1940-41	4,241,679	3,262,804
1941-42	2,844,092	2,098,601
1942-43	2,801,261	591,669
1943-44	3,021,453	71,641
TOTAL 1939-44	15,215,735	8,156,259

Sources: *Estimates of Revenue and Expenditure* and *Report on the Accounts and Finances*, various years. * Excludes £P 5,865 of grants for development purposes.

The above table indicates a difference of over £P 7 million (concentrated primarily in the later years) between estimated and actual wartime grants-in-aid. The difference is particularly great in those years when Palestine tax receipts have been substantially above the Treasurer's estimates. In such years the Palestine taxpayer has borne imperial expenditure that would otherwise have been met by the British Treasury. On November 28, 1944 the Accountant General of the Government of Palestine reported that the Palestine Financial Accounts for 1943-44 did not include £P 1,578,726 due from the United Kingdom for the fiscal year 1943-44. Had that amount been available on March 31, 1944 the cumulative revenue surplus of the Palestine Government would have stood at £P 2,231,000 instead of £P 652,000.

THE REVENUE SYSTEM

The total revenues of the Palestine Government, per capita of the total Palestine population, increased from £P 2.4 in 1922-23, to £P 2.8 in 1932-33, £P 3.5 in 1937-38, and £P 5.5 in 1942-43. The significance of these increases is, however, a very complicated matter. As indicated above, from 1922-23 to 1932-33 wholesale prices in Palestine decreased by one-third; the nominal rise in revenue therefore understates the real rise. From 1932-33 to 1937-38 prices in Palestine rose by only 5 to 7 percent; therefore the rise in revenues was almost entirely real. From 1937-38 to 1942-43, general price indices (of factors and products) rose by from 100 percent to over 200 percent; therefore the nominal rise in revenues masked a substantial real decline.

A more significant outline of the functioning of the revenue system can be given for recent years in which National Income estimates are available.

NATIONAL INCOME AND GOVERNMENT REVENUES OF PALESTINE, 1936-44

Fiscal year	*National income* (millions of £P)*	*Domestic revenues (thousands of £P)*	*Revenue as percent of income*
1936–37	33.8	4,495	13.3%
1939–40	30.0	4,635	15.4%
1942–43	75.9	8,260	10.9%
1943–44	90.0	11,441	12.7%

Sources: For National Income data, see Chapter 12. For revenue data, *Report on the Accounts and Finances . . .* 1943-44.
*National Income values for calendar year which includes only first 9 months of fiscal year; in view of the lag of tax collections behind liabilities, correlation should be better than with identical 12 months.

The decline in the ratio of revenues to total National Income during the war years is particularly striking in view of the great number of increases in tax rates and the introduction of wholly new taxes (particularly the Income Tax). This inelasticity of revenues with rising incomes points to a revenue system of a character to exaggerate the fluctations in the national economy by taking a larger share in taxes from a small National Income than from a large one. It suggests also—what is confirmed by other evidence—that the Palestinian revenue system is a very regressive one: a revenue system which yields a smaller percentage of a large National Income than of a small one can hardly be taking a larger percentage of big individual incomes than of small ones.

The following table outlines the general structure of the Palestine revenue system in the last five years of peace and in the first five years of war. The revenues are not grouped as in the Palestine official accounts but are assembled, as far as possible, in significant economic groups.

The British administration inherited from the Turkish regime a revenue system based on land taxes, customs, excises and fees for doing every conceivable type of business. No new principle was introduced into that revenue system until World War II, when the Income Tax was adopted. The one major change in the character of the revenue system from the end of Ottoman rule to World War II was the decline in the relative importance of the taxes grouped in item (2) in the table above and the increase in the relative importance of the taxes grouped in item (1). The burden of taxes on land and agriculture was diminished by decreases in tax rates, underassessment, far-reaching forgiveness of taxes in bad years, and lax enforcement. An extreme example of this trend is the Animal Tax, which yielded £P 27,437 in 1920-21 and only £P 28,327 in 1943-44 in spite of the doubling of the country's livestock.

PALESTINE GOVERNMENT REVENUES, PREWAR AND WAR

	Five fiscal years 1934-39		*Five fiscal years 1939-44*	
	In millions of £P	*In percent of total*	*In millions of £P*	*In percent of total*
(1) Customs and excise taxes	12.92	54.3	14.99	37.1
(2) Land, property and agriculture taxes	3.32	13.9	5.05	12.5
(3) Licenses, fees and fines	3.72	15.6	4.95	12.3
(4) Income from Government property, loans, and investments	1.62	6.8	2.85	7.1
(5) Income from Government enterprises (net)	−0.10	−0.4	1.24	3.1
(6) Income tax	0.00	0.0	3.11	7.7
(7) Grants-in-aid	2.32	9.8	8.16	20.2
TOTAL	23.80	100.0	40.35	100.0

Source: *Report on the Accounts and Finances*, various years.

In the 1930's the land registration "fee" emerged as the most important single land tax—almost as important in 1934-36 and 1943-44 as all other land and property taxes together. Since Jews were the important net buyers of land (in a "sellers' market"), they bore almost all of this tax. It was, in fact, a charge imposed on Jewish colonization in Palestine. In the years 1933-44, this charge totalled £P 3,325,000.

Customs duties were responsible for a much larger share of total revenues under the Mandate than they had been under Turkish rule. In 1920-21 customs accounted for 24.6 percent of local revenues, in 1935-36 for 49.0 percent, and in 1938-39 for 43.8 percent. In 1938 imported food, drink and tobacco paid an average duty of 20.4 percent of its value, manufactured goods other than foods paid an average of 15.2 percent, and mainly unmanufactured goods paid an average of 3.9 percent. Apart from their protective feature, the customs duties were designed to be a general consumption tax. In 1938 about 47 percent of the total customs revenue was collected on four commodities of which the consumption probably bulked much larger * percentagewise in the budgets of poor people than in the budgets of the more prosperous. These four commodities were sugar, tobacco, benzine (gasoline), and kerosene. The duty collected on these four commodities (£P 814,000) was equal to 131 percent of their value before tax.

The importance of excises also tends to make the Palestinian revenue system regressive. In 1938-39 excises accounted for about 7.4 percent of domestic revenues and in 1943-44 about 12.6 percent. Excises are imposed on salt, matches, tobacco, wine and spirits. In 1938-39 about 69 percent of total excise receipts were derived from tobacco and in 1943-44 about 60 percent.

About 15.6 percent of Palestine's total revenues in the years 1934-39 and about 12.3 percent in the years 1939-44 were derived from licenses, fees and fines. More than 30 separate levies are included in this group. They include stamps on business documents, motor licenses, professional licenses, court fees, registration fees, inspection fees, etc. This whole group of levies is based on the ancient principle of primitive tax systems: "Where you see a head, hit it!" The Palestinian taxpayer is not hit particularly hard, but he is hit very frequently and from every conceivable angle—apparently on the theory that in this way the tax burden is rendered less noticeable.

During the war years, the business undertakings of the Government (railway, harbors, telephone, telegraph and post) were converted into highly profitable enterprises. In 1943-44 the post and telegraph service took in gross receipts of £P 1,083,000 (more than twice the average of 1934-39) and brought the Treasury net receipts of £P 337,000. The railroads showed gross receipts of £P 3,166,000 (more than four times the average of 1934-39) and brought the Treasury net receipts of £P 312,000. Interest on Treasury loans and investments brought in £P 222,000 and profits on Currency Board operations £P 250,000. These four profit-making items together in 1943-44 brought the Palestine Treasury about 53 percent as much as the amount collected in income tax.

Most of the revenue changes adopted by the Government of Palestine during the war years have added to the inflationary pressure rather than diminishing it. Several of these changes would have been deflationary under normal circumstances, when Palestine was exposed to foreign competition and when increases in costs could not be passed on in higher prices without impairing sales, reducing employment, creating pressure for lower wage

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* Including indirect consumption in bus transportation and freight service.

rates, etc. Under war conditions, when the Palestinian domestic market constituted a relatively closed system and when British war supply authorities stood ready to buy at prices that assured a generous profit margin above all costs, these measures were inflationary.

The standard rate of customs duty was raised from the pre-war 12 percent to 15 percent in 1940 and 20 percent in 1944. Since wartime imports were dominantly raw materials entering into production costs (free of foreign competition) or basic foodstuffs covered by cost-of-living allowances, the increases in customs duties resulted in increases in prices—pyramided at each stage of fabrication and distribution. Most of the licenses, fees and minor taxes were also costs of doing business; as the rate of Government levy rose, an inflated cost unit was passed on in a higher price. High profits on public monopolies also contributed to an inflated cost structure. Even more inflationary was the expenditure of profits earned on the sterling investments of the Treasury and the Currency Board.

Even in the case of the income tax, the deflationary pressure exerted was of very limited force. The income tax collected was £P 197,000 in 1941-42, £P 900,000 in 1942-43, and £P 2,118,000 in 1943-44. In the first year collections were perhaps 0.5 percent of the National Income, in the second year about 1.2 percent and in the third year about 2.3 percent. Exemptions were too high and basic rates too low to afford any check on mass consumption. In this respect, however, Palestine's income tax is less unique than public pronouncements in other countries would suggest. The income tax is equally ineffective in limiting working-class consumption even in a country like the U.K.—though there are widespread illusions on this point.

EXAMPLE OF INCOME TAX IN PALESTINE AND GREAT BRITAIN, 1943-44

(Joint income of husband and wife is £ 400, of which the husband earns £ 275 and the wife £ 125. They have two dependent children.)

		United Kingdom	
	Palestine	*Current account*	*Postwar account*
Personal exemption	£P 300	£ 140	30
Earned income credit		40	26/13/4
Wife's earned income credit	50	72	
Allowance for children	70	100	
TOTAL ALLOWED	420	352	56/13/4
Taxable income	0	0	48/0/0
Amount of tax	0	0	15/12/0
Amount refundable as postwar credit			100%

Source: Unpublished study of D. Bergmann and K. Mendelssohn.

At a level of £ 450 this same family would pay a tax of £ 10/13/6 in the United Kingdom and only £P 1.5 in Palestine. In the United Kingdom there would also be compulsory saving* of £ 19/10/0; there is no such saving in Palestine. The family of the above table would have to have an income of £P 620 in Palestine before its tax liabilities would be £P 10. Nevertheless, it is by no means clear that a family with an income of £P 620 in Palestine would have a larger real disposable income after income taxes than a British family with £ 450. In 1943 the U.K. cost of living index averaged 131 (1935-39=100); the Palestine index averaged 233. It may well be that a family with an income of £P 620 in Palestine was poorer in 1943-44 than a British family with £ 450. Neither family's consumption was limited to a serious extent by an income tax liability of about £ 10. Where the Palestinian income tax differs from the British is not in its effectiveness as a check on working-class consumption—both fail at that—but in that the British tax limits the consumption (and takes away the savings) of the middle classes, while the Palestinian income tax does not.

In 1943 there were perhaps 450,000 families and single persons receiving income in Palestine. Only 25,226 individuals were found liable to income tax. Their total tax liability was £P 1,213,000. Some 1,201 companies (corporations) were also found liable to income tax; their total liability was £P 1,403,000. In 1943 the National Income was £P 90 million and Government expenditures (for the year ending March 31, 1944) were £P 14.8 million. Clearly an income tax of this limited character could not serve as a major barrier to inflation.

The way of the Palestine Government, in revenue matters, is not easy. In addition to all the class and special interest pressures to be found in other countries, there is the great split between the Arab and Jewish communities. Every revenue proposal is examined jealously by both communities—sure that the Government is favoring the other. Relatively firm statistical evidence on tax incidence is available, however, only for the income tax.

The liabilities admitted on the returns filed imply—if both national groups met their liabilities equally—that Jews had per capita tax liabilities, on the average, eight times as large as those of Arabs in 1942-43 and ten times as large in 1943-44. The difference in incomes legally subject to tax is, in all probability, much less than this.

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* It is very unlikely that the British compulsory saving has any significant effect, being less than would—on the average—be saved voluntarily.

PERCENTAGE DISTRIBUTION OF INCOME TAX LIABILITIES, BY NATIONAL GROUPS

	1942-43	*1943-44*
Arab share:		
Individuals	17.1	12.1
Local companies	1.3	2.3
TOTAL	18.4	14.4
Jewish share:		
Individuals	39.7	29.1
Local companies	23.3	32.6
Foreign companies *	3.9	6.3
TOTAL	66.9	68.0
Other share:		
Individuals		2.8
Local companies		2.3
Foreign companies		12.5
TOTAL	14.7	17.6
GRAND TOTAL	100.0	100.0
Local shares alone:		
Arab		16.4
Jewish		77.8
Other		5.8
TOTAL		100.0

Source: Official figures, *General Bulletin*, February 1945; adaptation in unpublished study of David Bergmann and Kurt Mendelssohn.

* Jewish companies organized outside Palestine.

Examination of the tax yield figures for individual Arab and Jewish towns indicates that—while both communities practice widespread evasion—evasion of income taxes is decidedly greater among the Arabs. As one student of Palestinian finance has put it, the Arabs "repudiated" the income tax. The Arabs have set tax rates as low as possible and have condoned general tax evasion in Egypt and Iraq, where they have their own national Governments; they see no reason to pay in Palestine. Jews in Palestine commonly also take an extremely narrow, partisan view of all tax measures. The Jewish community has advanced various studies to show that, with 32 percent of the population, it pays 75 to 80 percent of the Government taxes—and provides most of its own social services. The Jews are much less emphatic in putting forth the fact that they receive (see page 000 above) perhaps 56 percent of the total National Income of Palestine and are therefore in a much better position than the Arabs to pay taxes.

OBJECTS OF PUBLIC EXPENDITURE

The greater part of Palestine's Government expenditures come under the classical rubric of "maintenance of law and order." In the table below, items (1) and (2) and a large part of item (5) are devoted primarily to this purpose.

PALESTINE GOVERNMENT EXPENDITURES, PREWAR AND WAR

	Five fiscal years 1934-39		*Five fiscal years 1939-44*	
	In millions of £P	*In percent of total*	*In millions of £P*	*In percent of total*
(1) Security and defense	7.35	31.3	16.87	40.6
(2) General administration	5.45	23.2	11.22	27.0
(3) Debt service	0.70	3.0	0.86	2.1
(4) Loans from public funds (gross)	0.00	0.0	2.59	6.2
(5) Public works	5.82	24.7	6.24	15.0
(6) Government enterprises (net)	0.10	0.4	−1.24	−3.0
(7) Agriculture, irrigation, fisheries, forests, land settlement, land survey, land registration	1.61	6.8	1.57	3.8
(8) Education and health	2.27	9.7	3.45	8.3
(9) Miscellaneous development purposes	0.16	0.7	0.01	0.0
TOTAL	23.46	100.0	41.51	100.0

Source: *Report on the Accounts and Finances*, various years.

Several of the items of the above table are not as cleancut as might be desired. In the peace years, all of item (1) consisted of security and defense expenditures, but there was also a large amount of security expenditures under item (5). On the other hand, during the war years (especially during 1943-44) the "defense" category includes cost-of-living allowances for all Government activities and even the cost of subsidizing foodstuffs! Item (5) includes the most miscellaneous group of activities from water supply, to maintenance of public buildings, road construction, and construction of frontier posts or police stations.

What emerges clearly from a close examination of the annual accounts is the small volume of expenditure on social welfare and economic development.

The meagerness of the expenditure on public health is particularly striking. Poor health characterizes the whole of the Middle East. The care of infants is very backward among the Arab population, and they have a very wide incidence of trachoma, other eye diseases, and (as always among a very poor people) digestive disorders. The level of Government health outlays in the years 1934-39, when Palestine price levels were still broadly in line with world prices, is perhaps most meaningful. The contrast between the standard of health services provided by Government to the whole population and that provided by Jewish voluntary organizations to Jews* is very striking.

EXPENDITURES ON HEALTH BY GOVERNMENT AND BY JEWISH INSTITUTIONS

	Government expenditures, total in £P	*Jewish institutions' expenditures, total in £P*	*Government expenditure per capita of total population, in U.S. $*	*Jewish institutions' expenditure per capita of Jewish population, in U.S. $*
1934	161,703	*	0.64	*
1935	211,062	*	0.80	*
1936	242,831	377,828	0.86	4.70
1937	215,223	459,658	0.93	5.44
1938	245,646	468,849	0.79	5.35
1939	243,016	525,150	0.88	5.61

Source: Unpublished memorandum of the Hadassah Central Bureau of Medical Statistics, Jerusalem, Sept. 15, 1944. £P converted into $ at 4.86, the average N. Y. rate for the six years. Population figures: Gov. "mean settled" for total, Jewish Agency for Jewish. * Not available.

In no year did Government health expenditures reach $1.00 per capita of the settled population. Expenditures by Jewish institutions averaged $5.28 per Jewish resident. The effects of these different standards of health services on infant mortality and longevity have been described above (pages 139-142). The following has been the effect on the incidence of trachoma, an eye disease of great importance throughout the Middle East:

INCIDENCE OF TRACHOMA AMONG PALESTINE SCHOOL CHILDREN

	Incidence among children in Government Arab schools	*Incidence among children in Jewish schools served by Hadassah*
Earliest date reported	72%	34%
Early 1930's	55%	5.6%
Latest date reported	49%	2.4%

Sources: For Jews, Hadassah records; for Arabs, *Annual Reports* of the Government Department of Health. Earliest report, Jews 1918-19, Arabs 1922; early 1930's, average 1932-34; latest report, Jews 1942-43, Arabs 1939.

It is unfortunately clear that the incidence of trachoma is much greater among the general Arab population than among Arab school children alone. The school population is healthier than the average because it over-represents the cities and (due to the fact that the children of poorer parents do not go to school or drop out early) over-represents the more prosperous families.

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* Broadly speaking, Jewish medical services may be characterized as "for Jews" though such institutions as the Hadassah hospital in Jerusalem served Arabs from Palestine and neighboring countries of the Middle East.

As indicated above (pages 142-144), the education provided by the Palestine Government is on an even more primitive level than its health services. In 1941-42 there were only 404 Arab public schools in all Palestine, but there were about 850 Arab villages and towns. The Government Statistician estimates that in 1941 only 25 percent of all Moslem children between the ages of 5 and 15 were in school. About 89 percent of the Christians and about 90 percent of the Jewish children in the same age group were in school. Taking into account the small percentage of Arabs who are Christians and the short period of schooling, it is doubtful whether as many as 30 percent of Arab children today are going to school long enough to become permanently literate. The Director of Education has reported that school classes are generally so crowded as to "disorganize" teaching and to constitute a menace to health. The training of teachers is on so miserably inadequate a scale as to lay no basis for future progress. Moreover there is no real scholarship system to enable gifted children of Arab parents to cultivate their talents.

The difference in the standard of education provided (by Government) for the Arab population and for Jews (nearly 90 percent out of their own resources) perpetuates the gulf between the two peoples. It is not only the quantity but also the quality of education that differs. In 1941-42, some 56,600 Arab pupils in Government schools had 1,456 teachers, while 62,700 Jewish pupils in Jewish community schools had 2,827 teachers. The Arab children had only one teacher for each 38.8 pupils, while the Jewish had one teacher for every 22.2 pupils. Jewish school buildings and equipment were also on a much higher level than those furnished by the Government for the Arab population.

SHARE OF EDUCATION IN GOVERNMENT EXPENDITURES, 1929-44

Periods of five fiscal years	*Total Government expenditures*	*Government expenditures on education*	*Percent spent on education*
1929–1934	£P 12,273,000	£P 769,487	6.3%
1934–1939	26,530,000	1,252,635	4.7%
1939–1944	45,991,000	1,864,437	4.1%

Source: *Report on the Accounts and Finances.* Figures used without any adjustment for prices or accounting peculiarities.

Despite the utter inadequacy, at all times, of the educational system provided for the Arab population by the Mandatory Government, the share of public expenditures devoted to education has been allowed to decline drastically during the past ten years.

Even if we disregard the war years, we find it difficult to reconcile the decline of one-quarter during the 1930's, in the share of public expenditures devoted to education, with the faithful discharge of the responsibilities imposed by the Mandate for the development of a backward people.

The extent of Government initiative in land development and agricultural improvement has also been very small. Though instructed by the Mandate to facilitate close settlement of the land, the Government has spent almost nothing on irrigation, drainage or soil amelioration. Its one substantial commitment in this direction (participation in the Hula project) has been held up by the war. Yet its backwardness in this development work is, in no way, specifically a Palestinian problem: it is a general problem of the character of the British Colonial Empire. In 1939, the United Kingdom Secretary of State for the Colonies launched a new program for colonial development, with a great flourish of trumpets. That program envisaged an annual expenditure of £ 5.5 million for each of ten years on the whole vast reaches of land and 90 million people* comprehended in the colonial empire. In the perspective of such paltry designs, Palestine cannot complain that she was specially neglected.

It might be thought that, in view of the need for development, the Government of Palestine would at least spend as much on land development, afforestation and agriculture as it collected from those sources. In fact land, real property and agriculture taxes yielded £P 3.32 million in 1934-39 while the Government spent only £P 1.61 million on land survey, settlement and registration, agriculture, irrigation, fisheries and forests. In the years 1939-44, receipts from these sources rose to £P 5.05 million, while expenditures on these objects fell to £P 1.57 million.

Some progress was made in the 1930's in establishing Government experiment and demonstration centers designed to improve agricultural practices. But that progress had not gone far enough to commend itself to the Arab masses as anything other than a Government frill. During the disturbances of 1936-37, most of the centers were destroyed by Arab rioters, who could see in them nothing but a symbol of the hated Government and an object for looting. This work has not been restored to its previous level.

A fruit inspection service safeguards the quality of citrus. By the standards of California or Florida, there is nothing worth mentioning in Government citrus research. A plant protection service fights parasites. A veterinary service enforces quarantine regulations and helps to combat livestock diseases. Little has been achieved, however, in the improvement of the breeds of Arab livestock. Problems of poultry types adapted to Palestinian conditions have been a serious concern to Jewish poultry farming; Government research has been conspicuously lacking. The wartime development of fish breeding in artificial ponds has been entirely a Jewish venture; there has been no Government assistance. The most extensive institutional agricultural research done in Palestine is that of the Jewish Agency's research station at Rehovot, not the work of Government. The Government contributes less than 10 percent to the budget of the research station. In 1943-44 the Government spent £P 500 in establishing model Fellah farms, but nothing was spent on that purpose in 1942-43, and nothing was budgeted for 1944-45. The only advanced agricultural school for Arabs is the Kadoorie; the funds for this were bequeathed by a Jew, but the Government has provided no scholarships so that poor boys can attend without paying fees.

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* Including mandates, excluding India.

As indicated above, Government sponsored agricultural credit has been conspicuous by its absence, except in the case of the wartime citrus loans and other activities connected with war food supply. Barclay's bank has financed Arab rural credit cooperatives, at Government instance, but withdrew in 1939 failing Government assistance or guarantee; its peak of loans outstanding in this activity was £P 59,456 in the year 1937. A Government Committee reported in 1940 that, due to shortage of funds, Fellaheen regularly had to sell their grain at harvest time when prices were lowest. Were the Fellah enabled to hold his grain as little as two months, he would, the Committee reported, get from 25 to 50 percent more for his produce. However Government could not see its way to granting such financing. Much less has the Government entertained any more far-reaching idea of financing the general reconstruction of Fellah farming.

In industrial development (see Chapter 15) and in housing (see Chapter 16), Government activity to facilitate economic development has been much more limited than in agriculture. In transportation and communications, however (see Chapter 17), Government activity has been on a very large scale; the character of that activity has been described above.

LOCAL GOVERNMENT FINANCE

The 24 principal municipalities of Palestine during the years 1927-43 had total receipts of £P 10.7 million (apart from £P 1.0

million of grants-in-aid from the Government of Palestine). The Jewish National Council (Vaad Leumi), which is analogous to a local authority in the services it renders, had non-duplicated receipts of £P 1.5 million in the years 1930-43, in which it exercised its major activity. Local councils had receipts that may be estimated very roughly at an additional £P 1.5 million. Extending these figures backward to 1920 and forward to include the fiscal years 1943-45, the total revenues of these local government authorities may be estimated very roughly at £P 20 million, or 17 percent as much as the receipts of the Government of Palestine during 1920-45.

The rise in local revenues in recent years has been very striking. For 1944-45, the city of Tel Aviv alone estimated its revenues (apart from Government grants) at £P 1,126,000. Tel Aviv accounts for more than half of the total revenues and expenditures of the 24 leading municipalities.

In 1942-43, about 59 percent of the total revenue of the 24 leading municipalities was derived from municipal rates on immovable property, about 16 percent from charges for water, about 14 percent from charges for other specific services, and the remainder from a variety of minor sources. The following table shows the total expenditures of these municipalities in 1942-43, including £P 110,300 financed out of grants-in-aid.

PALESTINE MUNICIPAL EXPENDITURES, 1942-43

	Amount in £P	*Percent of total*
General administration	104,700	7.3
Pensions and gratuities	11,300	.8
Public security	9,700	.7
Interest	2,500	.2
Engineering	43,200	3.0
Public works	191,900	13.3
Loan account	113,800	8.0
Water supply	85,500	5.9
Education	238,700	16.6
Health services	307,200	21.3
Miscellaneous	330,800	22.9
TOTAL	1,439,300	100.0

Source: Special tabulation compiled by Dr. J. Schlesinger, Jewish Agency for Palestine.

The Government of Palestine, in its Religious Communities Ordnance of 1926, offered legal recognition and the right to levy taxes to all religious communities. The Jewish Community, or Knesseth Israel, alone has taken advantage of this right. Membership in Knesseth Israel is not compulsory, but every Jew belongs automatically unless he takes advantage of his legal right to drop out of the community. In 1943 about 97 percent of Palestine Jews belonged to Knesseth Israel; the remaining 3 percent consisted principally of ultra-orthodox persons, who found contemporary Zionism too secular and who rejected women's suffrage. Knesseth Israel is governed by a General Assembly, elected by Jews of both sexes, 20 years of age and over. The General Assembly serves for 4 years and designates its executive council or Vaad Leumi. Government regulations of 1927 empower the General Assembly to require local Jewish communities to levy property taxes up to 10 percent of the annual rental value for education and social welfare expenditures. Since 1933 the Vaad Leumi has also had the power to raise loans.

Vaad Leumi budgets have not been large, its total unduplicated receipts (apart from grants) aggregating about £P 1,543,000 in the years 1930-43. Since 1932, when the Vaad Leumi took over from the Jewish Agency the supervision of the Jewish public school system, it has been principally concerned with the administration of education. It also supervises Jewish public health and welfare activities. Most education and welfare expenditures are made, however, directly by the local communities. For instance, in 1938-39 the local Jewish communities spent about £P 470,000 on education; the Vaad Leumi spent about £P 147,000.* The Government of Palestine's contribution to Jewish public education, made through the Vaad Leumi, was about £P 50,000.

The standard of public services provided by Jewish local government units is much higher than that provided by Arab units. With all due regard to the lower cost of Arab labor, the following comparison remains striking.

PER CAPITA EXPENDITURES OF JEWISH AND ARAB LOCAL GOVERNMENT UNITS, IN £P

Expenditures of:	*1939-40*	*1940-41*	*1941-42*	*1942-43*
Jewish municipalities	3.504	3.449	4.039	4.071
Mixed municipalities	.796	.904	1.045	1.273
Arab municipalities	.401	.552	.714	.697
Jewish local councils	1.603	1.580	1.735	2.003
Arab local councils	.333	.437	.447	.353

Source: David Gurevich, special tabulation of Palestine public and quasi-public finances, 1944.

While Jewish per capita incomes are between two and three times as high as Arab ones (in monetary terms), Jewish communities representatively spent between four and eight times as much per capita on local public services as did Arab communities. The difference meant a sharp divergence in health, education and public amenities. Arab communities were held back from providing a higher level of public services by their poverty and by the natural unwillingness of a backward people, strong in family ties but weak in its allegiance to any wider community, to tax itself for such things as education and health—goods of which it knew little.

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* By 1943-44 the total Jewish education expenditure had approximately doubled; due to the rise in prices, the extension of service was accomplished only by a reduction in the real incomes of teachers.

QUASI-PUBLIC INSTITUTIONS

The Vaad Leumi is the one Jewish national institution controlled entirely by Palestinians. Because of the peculiar problems connected with the establishment of the Jewish National Home, several other institutions supported by world Jewry have, however, performed many quasi-governmental functions in Palestine. Opportunities have been offered several times to the Arabs to establish similar institutions, but they have lacked the unity, drive, and resources to do so. The Arab peoples of neighboring countries have not been specially interested in contributing to the support of an Arab national community in Palestine, and the wealthier Palestinian Arabs have no strong tradition of voluntary contributions to the social services of the poorer members of their community. Apart from religious foundations, there are no distinctively Arab quasi-public institutions that are primarily concerned with Palestinian economic development or social services. For these reasons, our discussion of quasi-public finance will be limited to the operations of Jewish institutions.

The most important quasi-public institution in Palestine is the Jewish Agency for Palestine. Until 1929 the World Zionist Organization served as "the appropriate Jewish Agency" which Article 4 of the Mandate gave the status of ". . . a public body for the purpose of cooperating and advising with the Administration of Palestine in such economic, social and other matters as may affect the establishment of the Jewish national home and . . . to assist and take part in the development of the country." In 1929 the Zionist Organization relinquished this official status to a Jewish Agency for Palestine, which included representatives of non-Zionist Jews. The Jewish Agency has an Executive, with a membership designated according to an agreement among the various world Jewish organizations interested in the development of Palestine. This executive functions as the spokesman for the Jewish interest in Palestine in all relations with the Mandatory Administration and other governments. Its fiscal arms have been the

Palestine Restoration Fund (1917-21) and the Palestine Foundation Fund (1921 to present).

The Jewish Agency has the greatest financial resources of any quasi-public institution in Palestine, having had total receipts of £P 16,781,000 between October 1, 1917 and September 30, 1944. Its range of activities comprehends the whole field of investment and social services, except for land purchase and amelioration, health services, and general education:* these functions have been taken over by other bodies. The scope of the activities of the Jewish Agency affords some ground for calling it, in the language of the Peel Commission, "a Government existing side by side with the Mandatory Government." In 1943-44 the Jewish Agency had a total income (apart from borrowing) of £P 2,812,000 compared with £P 11,514,000 for the Government of Palestine.

Second in resources and scope and oldest among Jewish Palestinian institutions is the Jewish National Fund. It was founded by the World Zionist Congress in 1901 and charged with the task of buying land in Palestine to be held as an inalienable trust in the name of the Jewish people. In addition to land purchase, the J.N.F. engages in soil amelioration, afforestation, and irrigation. At the end of World War I, the J.N.F. had cumulative receipts of only about £ 200,000. Under the Mandate, it has had receipts of £P 9.4 million. In 1944, the J.N.F. estimated that 45 percent of the Jewish rural population and 5 percent of the Jewish urban population lived on its land. In 1943-44 its receipts were £P 1,851,000.

The third most important world Jewish organization operating in Palestine is the Hadassah Medical Organization supported chiefly by Hadassah, the American women's Zionist organization. Hadassah's activities in Palestine concern health, education, the training of immigrant children and other social services. In the years before the Palestinian Jewish community was sufficiently well established to provide its own medical services, the work of the Hadassah was more important than that of any other health institution in raising the whole level of Jewish life in Palestine. Today its first position in the field of health has been overtaken by the Kupat Holim (the health insurance system of the Histadruth). Hadassah's work is becoming more specialized. In the years 1918-44, the Hadassah Medical Organization had receipts of £P 3,500,000. In 1943-44 alone its receipts were £P 363,000.

Other important Jewish national institutions include the Wizo

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* Even in this last field the Jewish Agency is not wholly inactive, having contributed £P 72,300 to the budget of the Jewish public education system in 1943-44 compared with £P 107,520 contributed by the Government of Palestine.

(Women's International Zionist Organization), which operates over almost the whole range of Jewish activities; its receipts in the years 1921-44 were £P 762,000. The Hebrew University had receipts (1923-44) of £P 1,897,000. Other funds, largely of an emergency character, had receipts (1929-44) of £P 3,054,000; the greatest constructive activity of these emergency funds has been the Youth Aliyah—the rescue of Jewish children in Europe and their training in Palestine.

The total receipts of these Jewish national institutions in the years from October 1, 1917 through September 30, 1944 were £P 35,620,000. This compares with £P 104,039,000 received by the Government of Palestine from July 1, 1920 through March 31, 1944. The following table compares the receipts of the Jewish national institutions with those of the Government of Palestine during the war years alone.

RECEIPTS OF THE GOVERNMENT OF PALESTINE AND OF THE JEWISH NATIONAL INSTITUTIONS DURING WORLD WAR II

	Government of Palestine	*Jewish National Institutions*
1939–40	£P 6,768,352	£P 1,916,500
1940–41	8,441,899	1,984,294
1941–42	8,325,553	2,184,966
1942–43	8,851,878	3,765,329
1943–44	11,513,748	5,904,101
TOTAL	43,901,430	15,755,190

Sources: *Report on the Accounts and Finances* and special unpublished tabulation of *Jewish National Finances* furnished by Mr. A. Ulitzur, Treasurer of the Jewish Foundation Fund. The Government fiscal year ends March 31 and the Jewish September 30.

During the war years the income of the Jewish national institutions rose to a greater degree than that of the Government. In 1943-44 Jewish national receipts were, for the first time, more than half as large as Government receipts.

CHARACTER OF JEWISH NATIONAL FINANCES

Table 11 gives an outline of the sources of funds and objects of expenditure of the Jewish national institutions.

As the table shows, 83.9 percent of the total income is classified as from contributions (item 1) and 16.1 percent is classified as from other sources (item 2). The distinction between item (1) and item (2) in the table is *not*, however, a distinction between income from contributions and income from earnings. In fact, the bulk of item (2) also consists of contributions or grants but from institutional sources rather than from individuals. In the 5 war years, the Jewish Agency alone received an amount of roughly £P 2 million in such grants; the grants were received from the Palestine Jewish Rescue and War Purposes Fund, from the American Jewish Joint Distribution Committee, from special receipts of the Jewish National Fund, and from a great variety of other sources. Of the remainder of item (2) which does not consist of grants, the bulk is made up of the recovery of the principal amount of loans. Unfortunately, available tabulations do not consistently break down collections on loans into principal and interest, yet from the information tabulated specially for us in Jerusalem, it may be estimated that, over their entire lifetime, the Jewish national institutions have received less than 4 percent of their total receipts

TABLE 11: RECEIPTS AND EXPENDITURES OF THE JEWISH NATIONAL INSTITUTIONS, OCTOBER 1, 1917 THROUGH SEPTEMBER 30, 1944

(*Thousands of £P*)

	Jewish Agency, 1917-44	*Jewish National Fund, 1918-44*	*Hadassah Medical Organization, 1918-44*	*Other, 1921-44*	*Total, 1917-44*
Receipts:					
(1) From contributions	13,031	9,254	2,658	4,948	29,890
(2) From services, collection of debts, grants, etc.	3,750	383	841	766	5,730
(3) TOTAL	16,781	9,636	3,500	5,714	35,620
Expenditures:					
A. *Social services*					
(4) Immigration and training	2,785			70	2,854
(5) Education and culture	2,260		612	3,759	6,631
(6) Health and social work	184		3,203	280	3,668
(7) National organization, security and emergency	2,482	108		308	2,898
(8) General administration	943	28		222	1,192
(9) Total social services	8,654	136	3,815	4,639	17,244
B. *Economic development*					
(10) Agricultural settlement	4,511	8,786		1,004	14,302
(11) Public works, labor and housing	1,646	19		142	1,817
(12) Urban settlement, trade and industry	1,348	870		171	2,390
(13) Total economic development	7,505	9,676		1,317	18,508
(14) TOTAL	16,159	9,812	3,815	5,956	35,753

Source: Special tabulation of *Jewish National Finances*, prepared by A. Ultizur, Treasurer, Palestine Foundation Fund. Figures for 1943-44 are provisional. Due to the transfer of funds among the various institutions, any single institution may display a substantial divergence between receipts and expenditures.

as income from investments (i.e., rents, interest, dividends, and profits). The highest ratio of earnings to total receipts is that of the Jewish Agency and the lowest that of several of the emergency funds.

Over the whole lifetime of the Jewish national institutions, about two-thirds of their contributions have come from the United States and about 5 percent from Palestine. During the first 4 war years, 60.3 percent came from the United States and 5.8 percent from Palestine.

About 48.4 percent of the total expenditures of the Jewish national institutions has gone for current social services (items 4-8 of Table 11) and about 51.6 percent for economic development (items 10-12 of Table 11). The Jewish Agency has been primarily responsible for services to immigrants, national organization, and emergency aid; before 1930 the Agency was also in charge of Jewish public education. The Hadassah has been the great national Jewish medical organization. A special Youth Aliyah organization (included in "Other" in Table 11) has carried the task of education and child care for children separated from their parents. All of these activities are essentially of a non-income-earning character. In performing them, the Jewish national institutions have been acting as a government rather than in the role of a private investor.

The 51.6 percent of Jewish national expenditures that we have classified as for "Economic development" are more nearly of an investment type. Even this category, however, includes many outlays (e.g., international trade-promotion, labor exchanges, etc.) that do not yield a cash return to the spending authority. If investment be defined as the *type* of activity which might be undertaken by a private firm in expectation of monetary return, not more than 40 to 45 percent of total Jewish national expenditures can be classified as investments. This would mean a total of about £P 14 million to £P 16 million over the years 1917-44. Of this total about £P 12 million to £P 13 million would be agricultural and £P 2 million to £P 3 million non-agricultural. And, even with this qualification, emphasis must be laid on the fact that these have been expenditures of the *type* which might have been undertaken by a private firm, not that a private investor would have distributed emphasis in the same way. As has been indicated in Chapter 14 above, no private investor, in search of monetary return, would have carried out the program of land purchase and improvement into which most Jewish national capital invested in Palestine has gone.

It is precisely in the field of agricultural enterprise that Zionists have most explicitly rejected the private investor's criteria.

Arthur Ruppin, than whom there is no more authorized Zionist spokesman, says of agriculture: "It is not just one of the branches of production: it is also the fountain of youth, in which we renew ourselves in the physical and spiritual sense after centuries of crippling life in the cities, remote from the soil. . . . I am at a loss to understand how an activity the main object of which is the occupational restratification of the Jews . . . can be guided by considerations of dividends. We might just as sensibly demand that our schools be run at a profit."

The largest investor in agricultural settlement has been the Jewish National Fund. Its investment has yielded the Fund a very small financial return. On September 30, 1943 the Jewish National Fund held land and improvements valued on its books at £P 8,193,000. During the subsequent year, the J.N.F. had a maximum* rental income of £P 84,506, or just over 1 percent on its investment; in the same year, the J.N.F. spent a total of £P 1,874,000. In the whole period 1918-44, the J.N.F. had a maximum rental income of £P 383,000. It has not derived an income from its past investments that could be significant in expanding the scale of its operations.

Second only to the Jewish National Fund, in its outlays on land and agriculture, has been the Jewish Agency. While the J.N.F. is the great land-purchase and reclamation authority, the J.A. is the great agricultural settlement body. Of the 253 Jewish rural settlements at the end of 1943, no less than 147 were founded initially with funds supplied by the J.A.; another 43 have received some financial aid from the J.A. Apart from its investments in various companies connected with agriculture, the J.A. has invested about £P 4 million in direct rural settlement work. A substantial fraction of this investment has been written off as a national development cost. The remainder is in the form of loans at interest from 2 percent to 4 percent and with a 20- to 50-year repayment period. The data on page 361 are the record of repayment through 1944.

In relation to the settlement outlays made by the Jewish Agency, the amounts collected on principal and interest are very small. A general impression prevails in Palestine that the record of repayment is better for the war years than for the prewar. In our judgment, if allowance is made for the rise of agricultural prices and incomes, this impression is erroneous. The collective settlements have received the largest share of J.A. loans; they have the poorest record of repayment. Since the J.A. has received only

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* A maximum because it includes all J.N.F. income from all sources other than contributions.

£P 192,000 back in principal and interest from its investments in agricultural settlement, these investments cannot be regarded in any significant degree as revolving funds from which the J.A. can enlarge its settlement work. Current practice in the recapture of loans to agricultural settlements means that the enlargement—if any—takes place within the framework of the established settlements.

REPAYMENT OF JEWISH AGENCY LOANS TO AGRICULTURAL SETTLEMENTS, PREWAR AND WAR
(in £P)

	Individual settlers		*Cooperative settlers*		*Collective settlers*		*Total*	
	Principal	*Interest*	*Principal*	*Interest*	*Principal*	*Interest*	*Principal*	*Interest*
1934-39	19,371	4,069	11,788	2,136	8,895	1,781	40,054	7,986
1939-44	21,827	2,197	53,767	6,018	41,168	18,733	116,762	26,948
TOTAL	41,198	6,266	65,555	8,154	50,063	20,514	156,816	34,934

Source: Special tabulations by A. Ulitzur, Treasurer of the Palestine Foundation Fund, Aug. 10, 1944 and March 26, 1945.

In addition to its direct loans to cultivators, the Jewish Agency has made a great variety of other investments in agriculture. On September 30, 1943 the Agency held an interest in at least 13 companies primarily interested in land development, irrigation and agriculture. It owns all the share capital (£P 187,360) in the Palestine Agricultural Settlement Association, Ltd., which has used this share capital, together with funds of £P 277,480 derived from debentures, for agricultural settlement work. It has interests in 6 water companies: the Mekoroth, the Gilboa, the Emek, the Samaria, the Palestine Water Supply, and the Ysreel. It also has interests in 6 agriculture and land-development companies: Rassco, Haifa Bay, Palestine Land Development, Nir, Palestine Drainage and Amelioration, and American Zion. It maintains the leading agricultural research station of Palestine at Rehovoth, and—in cooperation with the Jewish National Fund—it maintains a water research bureau.

A large part of the expenditure classified in Table 11 (item 11) under "Public works, labor, housing" might also be included under expenditure on agricultural settlement. The Jewish Agency's Department of Labor, which accounted for about nine-tenths of total expenditures in this class, was primarily interested in expanding employment opportunities, but in most instances such employment was offered in rural areas and dovetailed with the program of agricultural settlement. About 30 percent of the Department's expenditures in 1921-39 was devoted to rural road building, swamp drainage, leveling of sand dunes, and construction. About 35 percent went into labor training (mainly on-the-job training in agriculture) and a chain of labor exchanges (of which 22 were in rural areas and only one in an urban area, Haifa). Much of the expenditure on housing was on rural housing, including camps near plantations for farm workers. In addition to the companies mentioned above as being primarily concerned with land and agriculture, the Jewish Agency had interests in two companies primarily concerned with housing; these were Rural Workers' Housing and the General Mortgage Bank.

In the field of financing public works, construction and housing, the Jewish Agency has cooperated with the Histadruth in setting up Bizur, Ltd. Eary in 1945, Bizur's share capital and debentures totaled £P 583,000; £P 240,000 was held by the Jewish Agency.

In general, the field of urban settlement, trade and industry (item 12 of Table 11) has been relatively neglected by the Jewish national institutions despite the fact that their investments in this field have been almost uniformly profitable. They have felt that these areas of operation could safely be left more largely than agriculture to profit-seeking private capital. Nevertheless, the Jewish Agency today has some financial interest in at least 15 companies primarily concerned with urban development, trade and industry; these are Aviron, Urim, Marine Trust, Tel Aviv Development, Palestine Industrial Bank, Jewish Colonial Trust, Palestine Mining Syndicate, two Mizrachi banks, and 7 other companies. The Jewish Agency also contributed about £P 13,000 to the costs of the preliminary explorations preceding the formation of Palestine Potash; it subscribed £P 100,000 to the original £P 1,000,000 capital of Palestine Electric. Broadly speaking, the Agency's activities in industry have been limited only by the primacy it gives to agriculture and by the limited amount of its resources.

The Jewish Agency has also assumed the initiative and risk in connection with a wide variety of industrial credits advanced to Palestine business in the years 1938-44. In all these cases the Jewish Agency has attempted to make its funds go further by enlisting the cooperation of the resources of the Anglo-Palestine Bank, the Industrial Bank, and the Workers' Bank. First liability for losses is assumed by the J.A.; that liability varies, depending on the class of borrower, from 20 percent to 75 percent of the amount of the credit. Industrial credits of nearly £P 3.0 million were advanced during 1938-44 under these arrangements, with profit to the participating banks and net earnings of about 2 percent of the amount of its advances for the J.A. This £P 3.0 million included £P 1,643,000 for imports of raw materials and £P 773,000 for execution of army orders. These credits were directly related to war supply, and in any other country would have been the responsibility of government; in Palestine they had to be guaranteed by the Jewish Agency.

FISCAL POLICY AND DEVELOPMENT

Through March 31, 1945, the Government of Palestine has spent about £P 121 million under the Mandate. Local government authorities have spent very roughly £P 20 million (of which perhaps three-fifths has been spent by exclusively Jewish communities and the bulk of the remainder by the three great mixed communities of Jerusalem, Haifa and Jaffa). Jewish national institutions have spent about £P 40 million.

The Government revenue system has been an incoherent jumble of levies of predominantly regressive incidence. Taxes have been imposed without much consideration of their economic consequences. Until the establishment of the income tax, the Government revenue ideas showed few signs of progress beyond the most primitive conception that any tax that would "raise money" had some place in the revenue system. Despite the establishment of the income tax during World War II, other wartime changes in taxes were of such character that—on balance—it seems that the changes made in the revenue system during the war years were inflationary rather than deflationary.

For 25 years, the political situation of Palestine has been such that, to its British administration—more concerned for a quiet life than for heroic controversies—the greatest merit in any proposed tax has been that it could be imposed and collected without too much fuss. Neither the Arab nor the Jewish community has been fruitful in suggestions for a constructive reorganization of the revenue system. Each has been concerned primarily to shift as much as possible of the public tax burden to the shoulders of the other.

If the Jewish and Arab communities were "partitioned" territorially or financially, the Arabs would be unable, with present rates of tax liability and collection, to maintain the essential public services even at their present low level. There would be no hope for the Arab community of a progressive development of public services in health, education, and agriculture. The dynamic factor has been—and will continue to be—Jewish tax-paying capacity. Without the Jews, Palestine would revert to the level of Syria—or possibly even Egypt—a community of hopelessly poor, illiterate peasants, with a few urban workers and a thin layer of wealthy families. The Jews have made it possible for the Arabs of Palestine to rise above the level of the Middle East, but—particularly in the sphere of public services—the Jews have often loudly begrudged the benefits that they have bestowed. Even public-spirited Jews have felt that the money taken from them to pay for Arab social services would be better used to settle more Jews.

The level of social services provided by the Government of Palestine to the Arab population has been very low. Progress has been dishearteningly slow especially in the field of education. The backwardness of Arab education perpetuates the gulf between the Arab and Jewish peoples. It is a bitter truth that the police station on the hill rather than the school-house is the distinctive architectural landmark of British rule in Palestine.

The role of the Government of Palestine in initiating and sustaining economic development has been pitifully small, not only by Western standards but even by the standards of Egypt or Turkey. Had the Government of Palestine undertaken to invest £P 50 million to £P 75 million in Palestine in the 1930's, hundreds of thousands of Jews might have been saved from slaughter, and a constructive atmosphere might have been created in which more harmonious relations might have developed between the Arab and Jewish peoples. These are not large sums for a bold, responsible government. Enterprise and economic expansion create savings. As the war has shown, Palestine had a large volume of underemployed resources. Moreover, with British Treasury sponsorship, the London capital market was surely in a position to meet the needs that Palestine could not provide from her own savings: there was plenty of unemployment and underemployment in Great Britain. The difficulty was that the Government of Palestine—and its master, His Majesty's Government in the United Kingdom—did not conceive itself as being responsible for economic development in a creative, initiating sense.

Failing a public fiscal policy devoted to social and economic development, Jewish quasi-public institutions have attempted to supply some of the deficiencies of Government. Their resources have never been adequate to such a task. In the whole prewar period their total receipts were less than £P 20 million. About half of this had to be spent for current services and only the remainder was left for investment. Of the invested portion, in turn, most had to be spent on land purchases—at Palestine's high prices. The amount left was inadequate to play a great role in the task of resettling a people and creating the economic foundations of a

National Home; these tasks were performed primarily by private capital. If—as seems certain—the representative postwar Jewish immigrant into Palestine will be entirely without capital, new sources of public funds must be found.

PART IV

PALESTINE IN THE NEXT DECADE

CHAPTER 22

THE IMMIGRATION POTENTIAL

JEWISH POPULATION OF THE WORLD

At the end of 1937 the Jewish population of the world was at its all-time high. In 1800 world Jewry had numbered about 2½ million persons, or approximately 0.4 percent of the human race. At the end of 1937 it numbered about 16¾ million, or roughly 0.8 percent of the human race.

All estimates of Jewish population are subject to a wide margin of error because of difficulties of defining who is a Jew, and because of the absence of census figures on Jewish population (according to *any* definition) except for a few countries. The following are the best estimates we have been able to assemble.

JEWISH POPULATION OF THE WORLD AT END OF 1937
(*In thousands*)

America	5,375
Europe	9,970
Africa	655
Asia	725
Total	16,725
United States	4,800
Argentine	270
Canada	170
Brazil	55
Uruguay	25
Mexico	20
Cuba	10
Chile	10
Other	15
America	5,375
British Isles	340
France	270
Holland	115
Belgium	70
Scandinavia	20
Western Europe	815
Germany	365
Czechoslovakia	360
Austria	150
Italy	55
Switzerland	20
Central Europe	950
Poland	3,275
U. S. S. R. (incl. Asia)	3,130
Rumania	800
Hungary	440
Lithuania	160
Latvia	95
Greece	75
Yugoslavia	75
Turkey (incl. Asia)	75
Bulgaria	50
Eastern Europe	8,175
Minor European Countries	30
French Morocco	175
Algiers	130
South Africa	95
Tunis	70
Egypt	70
Abyssinia	50
Libya	25
Spanish Morocco	25
Other	15
Africa	655
Palestine	420
Iraq	100
Iran	50
Yemen	50
Australia	25
India	25
Japan and China	20
Syria and Lebanon	15
New Zealand	5
Other	15
Asia (and Oceania)	725

Sources: Estimates of Jewish Agency for Palestine, prepared by Dr. Arthur Ruppin for the Evian conference, adjusted for U. S. A. and Abyssinia in accord with *American Jewish Yearbook*, 1944-45, N. Y. Margin of error is easily 10 percent; figures more probably too low than too high.

As the table above indicates, the two great concentrations of Jewish population, before World War II, were in eastern Europe and the United States. These two concentrations accounted for more than three-quarters of all Jews. Eastern European Jewry was the greatest stronghold of orthodox religious Judaism and Jewish national feeling. United States Jewry was, of all large Jewish groups, the most comfortably adapted to its non-Jewish environment and the richest in wordly goods. Accordingly Eastern Europe was, in the two decades between the world wars, the greatest source of Jewish migration to Palestine, while the United States was—in proportion to the magnitude of its Jewish population—among the smallest.

The difficulties involved in making an estimate of the Jewish population of the world at the end of 1944 are immensely greater than those encountered in making an estimate for the end of 1937. There is little systematic, carefully sifted information on any of the areas recently freed from Axis rule. Almost nothing is known outside the U.S.S.R. of the survivors from the Jews evacuated to the interior of Russia from Poland, Bessarabia, the Baltic States, and Russia's own western territory. Subject to these major uncertainties, the world Jewish population picture at the end of 1944 records a shattering carnage.

JEWISH POPULATION OF THE WORLD
(*In thousands*)

	End 1937	*End 1944 **
Areas showing increase:		
United States	4,800	5,300
Other America	575	770
Africa	655	700
Palestine	420	565
Other Asia and Oceania	305	375
British Isles	340	400
Areas showing decreases:		
U. S. S. R.	3,130	2,000**
Europe from Soviet frontier to Rhine	6,025	1,050
Europe from Rhine to Atlantic	475	290
WORLD TOTAL	16,725	11,450

Sources: Information furnished by Jewish Agency for Palestine, Jerusalem, supplemented by *American Jewish Yearbook.* * Figures relate to V-E Day for liberated areas. ** Extremely conjectural; includes Jewish evacuees from Poland, Bessarabia, etc.

The change in the total Jewish population of the world between 1937 and 1944 reflects some natural increase among Jews outside continental Europe. It also reflects some flight from the area of

German control. Its central fact, however, is the huge success achieved by the greatest campaign of mass extermination in modern history. The magnitude of the extermination achieved dwarfs the power of imaginative realization. The human losses of the Jewish people are on an entirely different scale from those suffered by any other people during World War II. And these deaths are *Jewish* deaths. It would be a denial of historic reality in favor of empty legal formulas to write them down as deaths of citizens of Poland, or Russia, or France or Germany. These people were singled out to be killed because they were Jewish: they had no other common characteristic.

National Socialism chose the Jewish people for its most irreconcilable enemy. It was against the Jewish people—not against democracy, not against communism, not against capitalism, not against Poles, or Russians, or Frenchmen—that National Socialism waged its most uncompromising warfare. It was a warfare against civilians—men, women, and children. With a little organizing ingenuity, these people proved easy to kill. When German control extended from the English Channel to Stalingrad and from Norway to Dakar, nearly one-half of all the Jews in the world were under Nazi domination. National Socialism succeeded in reducing the Jewish population of the world by about one-third. It nearly wiped out the orthodox and nationally-minded Jews of the east European Pale.

It would be a falsification of history and a serious misconception of the temper of many of the peoples of Europe, among whom the survivors of European Jewry live today, to say merely that this mass extermination was carried out by "the Germans." On the one hand, a great number of Germans probably knew little of the magnitude or methods of killing Jews; little of the most deadly work was done in Germany itself and almost none there "in broad daylight." On the other hand, important elements in other countries knew a good deal of the extermination program and gave it their active assistance. Active supporters of the extermination of Jews were found in greatest number among Poles, Rumanians, Slovaks and Ukrainians. They were not unknown even in France. Indeed collaboration in brutal anti-Semitism was more easily secured in France than in Italy. The French upper classes, in particular, have a long tradition of doctrinal anti-Semitism, which is absent in Italy. In occupied Europe, nearly universal popular opposition to the Nazi persecution of the Jews emerged only in Holland, Denmark, Norway and Finland.

From the end of 1937 to the end of 1944 the Jewish population of continental Europe was reduced by over 6 million persons. The greater part of this reduction was produced at extermination factories. Prisons, concentration camps, and labor gangs served the same end, though on a smaller scale. Not all Jews, however, died as prisoners. Many hundreds of thousands were killed by starvation. Jews were denied food, clothing, shelter and medical attention so that they would die. Their families were broken up so that they should have no children. At the beginning of 1943, the bread rations allowed to Jews in the ghettos of Eastern Europe were only 32 percent as large as the meager bread rations for Poles in the General Government and only 22 percent as large as the bread rations allowed Czechs. Jews were excluded entirely from rations of protective foods. They were denied the right to buy clothing and were ordered to turn over much of what clothing they owned to the State. They were generally refused soap rations and debarred from using laundries. Any housing was regarded as too good for them. In Warsaw, Jews were forced to live more than 11 persons to a room. In Czechoslovakia, the German administration chose Terezin, a town with a normal population of about 7,000, to house more than 50,000 Jews.

Under these circumstances, Jews died by the hundreds of thousands without giving anybody the trouble of transporting them to extermination camps. Only the exceptionally hardy, enterprising or fortunate survived. Some eyewitnesses report that very few aged people or young children remain alive and that most of the survivors are men. These reports are, however, mere impressions; nothing accurate is known yet of the age and sex distribution of the survivors. All that is known is that the Jews who have survived are a fiercely tried people.

The horror of these years has eaten its way into the minds of many Jews far removed from the area of extermination. Ernst Cassirer, the distinguished German Jewish philosopher, reflects this experience when he says: "In our life, in the life of a modern Jew, there is no room left for any sort of joy or complacency, let alone of exultation or triumph. All this has gone forever. No Jew whatsoever can and will ever overcome the terrible ordeal of these last years. The victims of this ordeal cannot be forgotten; the wounds inflicted upon us are incurable." Cassirer is mistaken. Among Jews, as among all other peoples, most men are too lacking in imagination to be stirred permanently by remote events. The impact of tragedy passes, and day-to-day claims reassert themselves. Yet the tragedy of these years *has* had a profound impact upon world Jewry. It has meant, among other things, a shift in the attitude of many Jews towards the idea of building a large Jewish community in Palestine.

JEWISH DEMAND FOR ENTRY INTO PALESTINE

How many Jews now outside of Palestine wish to go to live there? How many Jews now in Palestine wish to go elsewhere? The answers to these questions are of the first importance, yet any answers that can be given now are necessarily vague. They may suffice for current policy determinations, but they defy long-term forecasting.

The very questions have a false precision. Speculative questions receive only speculative answers. For Jews to have precise ideas on whether they want to go to Palestine they must be confronted with realistic opportunities for going there. In September 1945, the Palestine Government was allowing only 1,500 Jews per month to enter the country. Are Jews being asked whether they wish to go to Palestine in some indefinite future? Must they arrange all their affairs in precarious balance between migrating and not migrating, waiting, waiting for the moment when Palestine is ready to receive them? Should all Jews who are not ready to live such precarious lives be classed with those who are not interested in going to Palestine?

Moreover, Jewish determinations with respect to migrating to Palestine are influenced profoundly by the outlook with respect to Palestine's future immigration policy. There were no hesitations during the war years when it was a question of escaping death. Then all European Jews wanted to go to Palestine—or anywhere else out of Nazi control. But now that the Nazi power is broken, second thoughts are possible. What is the use of going to Palestine if the closing of the doors of the Jewish National Home may create conditions making it necessary to leave there a few years later? Can Jews be blamed if they wish to wait a while to see what is going to be the political future of Palestine? It is one thing for a Jew to jostle for the privilege of being the last one under the wire into a ghetto that will be closed after him to any further Jewish immigrants. It is another thing to emigrate to a country where he knows that other Jews are free to follow him and that their eventual numbers will be limited only by their own creative capacity.

Further, the chances of making a living in Palestine are too unclear to many Jews for them to be sure whether they wish to go there or not. A Jew who is told that Palestine may have a place for him some three years hence may reasonably ask to be allowed to see how the Palestinian economy develops during the next two years before making up his mind finally that he wishes to go there.

In the interim, he will naturally be influenced in his decision about going to live in Palestine by whether the United Nations recognize Palestine as a country of Jewish resettlement and development and by what steps are taken to implement this recognition. A United Nations decision to open Palestine to Jewish settlement and development might reasonably be implemented by the allocation to Jewish Palestine of substantial reparations in consideration of the Jewish property destroyed in Europe. Such a decision would also mean access for sound Palestinian development projects to public lending institutions, both national and international. These things would naturally make a tremendous difference in Jewish evalulations of the desirability of migrating to Palestine.

Finally, for Jews to know whether they want to go to Palestine, they must know more than they can know now not only of what they are going *to* but also of what they are going *from*. If, as seems not unlikely, given appropriate policy decisions, Jewish large-scale migration to Palestine extends over some years, conditions in the countries of exit will undergo many changes. What will be the degree of their economic rehabilitation and further progress? In what measure will Jews cease to suffer from political, economic and social persecution? How widely will Jews achieve the sense of psychological security which is their most common lack when they live in dominantly non-Jewish societies?

These uncertainties are great. Yet they do not mean that there is no resting point between zero and the whole 11½ millions of world Jewry in our consideration of the number of Jews who may wish to migrate to Palestine during the next decade. The significant range is narrower than that—if we bar world utopia, on the one hand, and another anti-Semitic wave of the magnitude of National Socialism, on the other. But the range is not clean-cut. It cannot be determined without evaluations subject to very wide errors. And it is not a matter on which it is possible to secure a large measure of agreement, even among informed and relatively dispassionate persons.

The largest Jewish group among whom a high percentage may seek entry into Palestine is constituted by the approximately 1,050,000 survivors who, at the end of 1944, were living in Europe between the new Soviet frontier and the Rhine. About half of these were living in Rumania, Bulgaria, and Poland, all countries with considerable numbers of nationally-minded Jews, who have traditionally contributed most to Palestinian immigration. The surviving Jews of Hungary, Germany, Austria—though traditionally more "cosmopolitan" and preferring emigration to more Western countries—may also go to Palestine in considerable numbers if they cannot go elsewhere. Many Italian and Czech Jews may be attracted to a reaffirmation of their Italian and Czech nationality, but others wish to emigrate. In Switzerland some 25,000 Jewish refugees have not been accepted as permanent residents, and most of them will have to emigrate or return to their countries of origin.

Throughout eastern and central Europe, at the beginning of 1945, Jews were living amid a population profoundly steeped in anti-Semitism, often of a variety considerably predating National Socialism. They were surrounded by the fresh graveyards of their people. The restoration of Jewish employment and property rights was proceeding slowly and grudgingly. Some Jews, particularly where Soviet influence was strong, were being attracted into the work of rebuilding along lines strongly influenced by Soviet example, but even where Soviet influence was strongest Jews were not being immediately restored to their former positions for fear of antagonizing the local population, which has profited from the dismissal and dispossession of the Jews.

We do not wish to suggest that we can establish any precise percentage of potential migrants to Palestine among the whole group of Jews living today between the Soviet frontier and the Rhine. Current information on their desires is exceedingly fragmentary and biased. Moreover, the likelihood seems to be that they will not have opportunities to migrate to Palestine at a single time but rather over a period of years. Over these years, views may change. Opportunities to migrate to other countries are particularly difficult to assess at present. Nevertheless, on the basis of such fragmentary evidence as we have, it does not seem improbable that—despite other pulls—a progressive, expanding Jewish economy in Palestine might, during the next decade, attract half of all the approximately 1,050,000 Jews now living between the Rhine and the Soviet frontier. It is not impossible that it would attract as many as three-quarters of them.

A high percentage of migrants to Palestine cannot be expected from among the Jews of the Soviet Union. Public policy is opposed to all emigration from the U.S.S.R. Nevertheless, there is scattered evidence of the persistence of Zionism among some Russian Jews. In the year 1919-42 there were 30,926 Jewish immigrants into Palestine who recorded the U.S.S.R. as the country of their citizenship, including 9,917 between 1926 and 1942 who recorded the U.S.S.R. also as the country of their last residence. Until recently Zionism was repressed in the Soviet Union as counter-revolutionary. It seems, however, that persons resident in the Polish areas recently annexed by the U.S.S.R. will be allowed to choose between emigration to Poland and Soviet citizenship. Poland, in turn, has declared its willingness to allow Jews to emigrate to Palestine.

Should this emigration be allowed, it might affect about 200,000 Polish Jewish refugees now in Russian territory. The exact number of Jews originally evacuated to the Russian interior is in doubt; the number surviving is still more uncertain. The Polish Embassy in Kuibyshev estimated that over 100,000 Jewish refugees in the U.S.S.R. came from Poland west of the Curzon line. Emigration to Palestine, in large numbers, has not hitherto been a practical question since the Government of Palestine would not admit the immigrants. Many hundreds of children have, however, been allowed to emigrate. We are not acquainted with any Soviet determination of whether others will be allowed to emigrate later, when entry into Palestine may again become possible.

The western countries of the European continent, particularly France, Belgium, Holland and the Scandinavian countries, now have a total Jewish population of only about 290,000, or little more than three-fifths their Jewish population at the end of 1937. It is doubtful whether a substantial part of these survivors will wish to emigrate to Palestine. These Jews too have suffered persecution and massacre. They also have found that the expulsion of the Germans has not meant an immediate effective restoration of all personal and property rights. Yet the process of restoration is continuing. In the past, the Jews of these countries have not dominantly regarded themselves as of Jewish nationality: they have thought of themselves as Frenchmen or Dutchmen or Swedes of Jewish faith or origin. Zionism is strongest in these countries among "alien" groups—e.g., Polish Jews resident in France. Only about 2,000 Jewish citizens from this group of countries emigrated to Palestine during the past quarter century. (The Jewish Agency published figures, for 1919-42, show only 651 immigrants with French citizenship and only 608 with Dutch citizenship; Belgium and Scandinavia accounted for so few that they are sunk in the "all other" category.)

A special problem in these countries is the large number of Jewish orphans. Some estimates run in the tens of thousands. Many of these orphans might eventually be brought up in Palestine. There is also some problem in connection with Jewish residents who are not citizens; many of these may have to emigrate—but not all to Palestine. Danish Jews, now in Sweden, will probably go back to Denmark. The few central European Jews who remain in Holland, Belgium and France may find their ways in part to the Americas. The Jewish citizens of this group of countries seem likely overwhelmingly to stay where they are. They will attempt to secure an equal place in a tolerant, progressive, dominantly non-Jewish society—or, at least, so it seems at the present. While we were prepared to conjecture that, during the next decade, 50 percent to 75 percent of all Jews now living between the Soviet frontier and the Rhine might wish to migrate to a progressive, developing Jewish Palestine, we would be surprised if even such a Palestine succeeded in attracting 20 percent of the Jews now living between the Rhine and the Atlantic. But we would remind our readers that all such conjectures are merely conjectures. We claim no special omniscience for our own.

There seems no reason to believe that the Jewish citizens of the United Kingdom will contribute more to the future population of Palestine than will those of western Europe. On the contrary, since there are no specially large groups of Jewish orphans among British citizens, the United Kingdom's contribution to emigration to Palestine will probably be smaller than that of western Europe. In the years 1919 through 1942, the Jewish Agency recorded only 1,165 British citizens among Jewish immigrants into Palestine. An expanding Palestinian economy may attract valuable skills and capital from among British Jews, but there is at present no reason to anticipate large numbers. For the coming decade, so far as can be seen at present, British Jewry might contribute to an expanding Palestine some hundreds of persons each year. There is no reason to anticipate thousands. The same is true of the British dominions.

However, apart from British citizens, there are now about 60,000 Jewish refugees living in the British Isles (including Eire). No responsible British public official has ever indicated that many of these refugees would be permitted to become permanent residents. They are confronted by both economic and cultural exclusiveness—by British uncertainty both of being able to find jobs for them and of assimilating them to British ways of life. We have no recent, direct acquaintance with trends of thought among these refugees. However, since they come predominantly from central and western Europe, some of them will no doubt wish to go back to their countries of origin, and some will prefer emigration to the Americas. A considerable fraction of them may also wish to go to Palestine.

The country which contains the largest number of Jews, the United States, does not contain many Jews who wish to go to live in Palestine. In the years 1919 through 1942, only 8,043 Jewish citizens of the United States were recorded by the Jewish Agency as having emigrated to Palestine. At the end of 1944, perhaps 2,000 of these remained in Palestine. When compared to the approximately 4 million average number of Jews who were living in the United States in the years after 1919, this emigration is insignificant. Short of a profound new wave of anti-Semitism in the United States, there is little reason to believe that American Jewish emigration to Palestine will increase greatly during the next decade. Stable political conditions and an expanding economic outlook will undoubtedly attract some persons. Their skills and capital may have an importance out of all proportion to their numbers. But there is no reason, at the present time, to believe that the numbers will be large.

The various Zionist organizations of the United States (the Zionist Organization of America, the Hadassah, the ZOA youth groups, the Junior Hadassah, the Poale Zion and affiliates, and the Mizrachi) had a total membership of about 400,000 at the end of 1944. But these organizations do *not* consist of people who wish to go to Palestine. They consist of people who are prepared to assist other people in establishing themselves in Palestine. As the percentage of first-generation Jewish immigrants becomes less important in the total American Jewish community, the number of Jews who are interested in migrating to *any* country outside the United States also decreases. American Jews are absorbed by the problems of American life. Palestine occupies only an extremely peripheral position in their consciousness. Therefore, despite Palestinian Zionist efforts to attract American Jews, it seems extremely unlikely that more than one or two thousand Jews per year will wish to go from the United States to live in Palestine.

It would be a vain enterprise to review all the Jewish communities of the world, one by one, in an effort to determine their need or desire to migrate to Palestine. Even for the Jewish community of the United States, which we know well, we cannot come to any determination concerning prospects of emigration to Palestine that will be accepted by all informed and dispassionate persons. Our knowledge of smaller, more remote communities is too limited to justify any except the most general consideration.

There are about 600,000 Jews in Latin America and about 400,000 in North Africa (excluding Egypt). They are of very diverse cultural background and economic status. In the past their contribution to Palestinian immigration has been negligible. According to Jewish Agency figures, only 634 Jews with Latin American citizenship and only 302 with African (excluding Egyptian) citizenship are recorded as having immigrated into Palestine during the years 1919-42. An expanding, prosperous Palestine might attract greater numbers. Some Zionists believe that a large emigration of Jews from North Africa could be organized were Palestine opened to Jewish settlement. We have, however, no current basis for regarding the Jews of these areas as being "in the first line" for emigration to Palestine.

Another group of countries, however, namely the Arab countries of the Middle East (particularly Egypt, Yemen, Syria, Lebanon and Iraq), has a population of about 260,000 Jews who, while not now all in the first line for emigration to Palestine, may easily be projected into the first line. A solution of the political status of Palestine that opens facilities for Jewish immigration may well lead to anti-Jewish measures in these countries. They are the strongholds of Arab nationalism. Already the approximately 45,000 miserable and persecuted Jews of the Yemen desire almost 100 percent to emigrate to Palestine. The 110,000 Jews of Iraq have already experienced one pogrom, and the temper of Iraqian governments is such as might easily lead to other larger ones. The small Jewish community of perhaps 25,000 persons in Syria and the Lebanon can expect more civilized treatment, but it may also be exposed to pressure to migrate. Even of the 80,000 Jews in Egypt—the best-established Jewish community in any Arab country—a substantial part may find it necessary to migrate. Egyptian Jews are now putting a part of their capital into Palestine, as security against becoming penniless refugees. For Jews from the Arab Middle East, migration to Palestine has meant, in the past, a major improvement in economic conditions, social status, and cultural facilities. Given these pressures and attractions, it is quite possible that, during the next decade, if Palestine is opened to Jewish immigration and development, a higher percentage of Jews will find it necessary and desirable to emigrate to Palestine from the Arab Middle East than from any other area of the world.

The most sane and farseeing of analysts, had he been asked in 1935, "How many Jews will desire to emigrate in the coming decade?" would have provided an answer far too small. We cannot be confident that our own error will not be equally great. That is the wisdom of the Zionists. They say: "We want a country not only for those Jews who want to come here now, but also for those who don't want to come here now but may want to do so later."

We are not in a position to take account of such unformulated desires. We cannot assess the possible consequences of a great new wave of anti-Semitism. We cannot measure the magnitude or quality of European reconstruction. We cannot allow for major shifts in immigration policy outside Palestine. We cannot presume an as yet non-existent upsurge of Zionist conviction among Western Jews. However, on the basis of facts now known and conjectures which now seem probable, we estimate that between 600,000 and 1,500,000 Jews might need and desire, during the coming decade, to go to live in an expanding Jewish economy in that country. These estimates are presented in the table below. The tabular form should give no specious suggestion of firmness.

JEWISH DEMAND FOR ENTRY INTO PALESTINE, 1945-1955

Area of present residence, including refugees now in the area	*Lower range of probable demand*	*Upper range of probable demand*
U.S.S.R. (refugees and recently annexed area only)	10,000	150,000
Europe from Soviet frontier to the Rhine	500,000	800,000
Europe from the Rhine to the Atlantic	10,000	70,000
United Kingdom and British dominions	10,000	50,000
U.S.A.	5,000	20,000
Latin America	0	25,000
North Africa	0	100,000
Arab Middle East	65,000	225,000
Other	0	60,000
TOTAL	600,000	1,500,000

NON-JEWISH DEMAND FOR ENTRY INTO PALESTINE

In Chapter 11 above, the total net immigration into Palestine in the years 1919-44 was estimated at a minimum of 425,000. Of this total, about 385,000 was estimated to have been Jewish and at least 40,000 non-Jewish.

Of the total recorded non-Jewish immigration into Palestine, about three-quarters has been non-Arab and only one-quarter Arab. If a minimum allowance be made for unrecorded immigration, the Arab share would rise to about one-half.

Among the countries of origin of Palestine's non-Jewish and non-Arab immigrants, Great Britain has been by far the most important. Next in order have been Germany, Italy and France. The first position of Britain reflects the large number of her citizens who have come to Government positions in Palestine. Business connections and religious institutions have also drawn a considerable number of British and other non-Jewish Europeans. In the measure in which Palestine continues, during the next decade, to have a non-native administration, an expanding population, and a correspondingly expanding Government personnel, she will continue to receive non-Jewish and non-Arab immigrants for Government services. She will also no doubt continue to receive immigrants reflecting international business connections and world Christian interest in the Holy Land.

Some believe that large-scale Jewish immigration into Palestine will lead to substantial Arab emigration. Our observations and analysis lend no support to this thesis. With the exception of a few border groups (particularly Druses), the Arabs of Palestine cannot be induced to leave the country. They are too well off in Palestine and too attached to the places of their birth to migrate willingly to lands of which they know little, where the condition of the masses is worse than in their present homes. All plans to transfer them voluntarily, on a large scale, to Iraq or Transjordan or Syria seem to be without current foundation.

Nor will there be, in our considered judgment, any pressure on Arabs, during the next decade, to leave Palestine. On the contrary, within the limits of the economic adaptation possible in a decade, *the more Jews there are in Palestine, the more room there will be for Arabs.* Jewish development will bring capital and skills into the country. A rapidly expanding Jewish agriculture will demand more of the traditional products of Arab agriculture (particularly grains) for further processing. More Arab labor will be needed in transport and public services. In the face of an immediate housing shortage and of the full employment produced by large-scale immigration, the Jewish community will probably be driven to employ more Arab labor in construction. In this way, large-scale Jewish immigration into Palestine will tend, certainly in the first years, to act as a suction pump drawing Arab immigrants from neighboring countries with a lower standard of living.

For these reasons, we believe that a large-scale Jewish immigration into Palestine is likely, for the next decade, to attract a non-Jewish immigration in roughly the same proportion as the past. That would mean non-Jewish net immigration of the order of 10 percent of total net immigration. Only as Government and international business come to be staffed more exclusively by Palestinians will there be a decrease in non-Jewish middle-class immigrants, and only severe control measures will suffice to check working-class Arab immigration.

In time, a large non-Jewish immigration would cause serious concern to Jewish national leaders because of its conflict with their objective of attaining a Jewish majority in Palestine as rapidly as possible. We do not believe that the leaders of the present Jewish community in Palestine would insist, however, on a policy of excluding all non-Jewish immigrants. They are ambitious to make Palestine a model for the whole Middle East. They believe that—given ingenuity, capital, a development-minded Government, and cooperation between two peoples—Palestine can be made to support several times as many people as it has now. They are therefore not frightened by the prospect of some Arab immigration into Palestine, though they may wish to use this immigration as a lever to secure freedom for Jews to live on equal terms in neighboring countries.

On balance, it seems wise to count on non-Jewish net immigration into Palestine, during the next decade, ranging from zero to 10 percent of the amount of Jewish net immigration.

Unless there is severe control over movements in and out of the country, the divergence between gross and net immigration will probably be substantial. Arabs from neighboring countries will move in and out. Even the Jews, who come from distant countries, have shown a considerable mobility. In the period 1919-31 only 74 percent of the gross Jewish immigration remained in the country. In the period 1932-43, fully 93 percent of the gross Jewish immigration remained. The experience of the next decade also surely will not be entirely that of a one-way flow.

COSTS OF GENERAL IMMIGRATION SERVICES

In the years 1917-42, the various Palestinian Jewish national funds spent £P 1,419,000 on immigration and training services. Gross Jewish immigration in those years numbered about 409,000 persons. If the total outlay be shared over all the Jews who came into the country—because even those who did not remain generally cost the Jewish national institutions something—it comes to about £P 3.5 per immigrant. About £P 1.2 would be an adequate allowance for the cost of the services (registration, innoculation, etc.) furnished to immigrants by the Government of Palestine. There is duplication between these two figures because the Jewish institutions paid the Government's fees for many poor immigrants. Even disregarding the duplication, however, the total public and quasi-public outlay for immigration services (including training abroad and in Palestine) came to only about £P 4.7 per immigrant. At the foreign exchange value of the £P in these years, this meant an outlay per immigrant of roughly $22.50.

In a single fiscal year, 1943-44, the Jewish Agency spent £P 1,183,000 on refugees, immigration and training services (*excluding* the training activities of the Youth Aliyah). Gross Jewish immigration into Palestine in that year numbered 13,872. Expenditure per immigrant was therefore about £P 85 ($340). This total is not readily comparable with prewar experience. It excludes sizable expenditure, on the same immigrants, by the Jewish Joint Distribution Committee. On the other hand, it includes expenditures of £P 974,000 on general relief and rescue work in Europe and the Yemen, much of which bore no specific relation to the immigration of this particular group of people. If the whole of this £P 974,000 is excluded, we arrive at a figure on the amount spent by the Jewish Agency in Palestine, which comes to £P 15 per immigrant. In addition to these costs borne by the Jewish Agency, immigrants in their first year in Palestine now require about £P 5 per capita of special social services rendered by local Jewish institutions. Therefore, even if we disregard the small services rendered by the Government of Palestine, costs of handling immigrants within Palestine are now roughly five times as high as they were before the war.

Most of the refugees who have arrived during recent years have been destitute. The Yemenites, in particular, had no shoes, no clothing except that on their backs, no money with which to buy food or a few meager household utensils. Some of the refugees have been in bad physical and mental condition. In rare cases, when they were in exceptionally bad condition and had no relatives in Palestine, immigrants have remained as long as eight months in the special hostels provided by the Jewish Agency. The burden on the Agency has therefore been very heavy.

Despite the fact that the Mandate instructed the United Kingdom specifically to "facilitate Jewish immigration", the Government of Palestine has borne no part of these burdens. A Department of Migration was established by the Government of Palestine in 1931. From 1931 through 1944 the Department spent £P 362,891. But the Department is an income-earning institution. In 1943-44, the Department of Migration spent £P 27,465, while it collected £P 27,714 in fees for passport services and for the registration of immigrants. For 1943-44, the Government Department of Health budgeted an expenditure of £P 2,783 for the Immigration Clearance Camp. Actual expenditure was £P 259. The explanation column of the official *Report on the Accounts and Finances* bears, opposite this item, the calm notation, "Not Required".

Various attempts have been made, by the staff of the Jewish Agency to estimate the costs of immigration services required for an immigration of 1 million Jews. All of these estimates suffer unavoidably from inability to specify the rate of migration, the areas from which the immigrants will come, the age and physical condition of the immigrants, the relevant price level,* and the contributions to the cost of immigrating which the immigrants may be able to make out of their own resources. Critical review of these estimates suggests a possible postwar cost per capita of about £P 20 for transportation and other expenses in transit, £P 6 for each month's non-earning maintenance, and £P 5 to £P 10 for extraordinary social services during the first year after immigration.

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* We shall assume, in accordance with the argument of Chapter 28 below, a postwar price level 50 percent higher than Palestine's prewar one and, at that price level, convertibility of £P into dollars at a rate of £P 1.0 equals $4.

In addition to these "current" costs, some immigrants will need temporary housing and household equipment. If immigration is gradual, a capacity of temporary housing (about £P 40 per person-capacity) and household furnishings (about £P 10 per person-capacity) will be required only for a small fraction of the total number of immigrants: they will use it in turn. Moreover, modification of Army barracks for immigrants' use can partly take the place of new construction. Some immigrants will not need anyone to maintain them and will quickly be in a position to pay taxes, like any other member of the community, in exchange for normal social services. If the average non-earning period per breadwinner does not exceed three months, the general cost of a gradual migration into Palestine may be held down to a level of about £P 50 per capita, and of this cost the immigrants themselves may be in a position to bear a considerable part.* There are, however, important special cases where this £P 50 allowance is much too small and where the immigrant cannot be expected to bear any part of the cost of migration and subsequent adjustment in Palestine.

COST OF SPECIAL IMMIGRATION SERVICES

The largest special cost resulting from the character of Palestinian immigration is that of the care of Jewish orphans and children separated from their parents. The Jewish Agency believes that Jewish orphans in Europe now number many tens of thousands. The Agency feels a special responsibility for gathering these orphans and bringing them up for the Jewish people. In its general plans for an immigration of 1 million Jews into Palestine, the Agency thinks in terms of about 100,000 children without parents.

Jewish Palestine today has, in its Youth Aliyah,† the nucleus of an organization for caring for such large numbers of children. The Youth Aliyah gives its children maintenance, general education, and vocational training (principally for agriculture) until they reach the age of 18. The children live simply and, for the most part, in close association with existing rural communities. From the age of 15, they spend half of the day at work (training) and only half in the classroom. They become adapted to Palestine quickly. From our personal observations, we believe that the Youth Aliyah has achieved a rare success in combining arrangements for bringing up large numbers of children with a degree of personal attention which expresses regard for the child as an individual. Its accomplishment challenges comparison with that of any comparable institution in any country.

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* A quicker migration will be more costly because temporary housing and household furnishing will be required for more people.

† "Aliyah" means physical and spiritual ascent, also immigration.

The numbers of children cared for hitherto by the Youth Aliyah are, however, not yet of the order of magnitude of the probable requirements of the next decade. From 1934 to September 30, 1939, the Youth Aliyah received from abroad 4,886 wards. From September 30, 1939 to September 30, 1944, the Youth Aliyah received an additional 7,246 wards. On September 30, 1944 there were 4,026 wards in training. This is a sizable number, but the requirements of the next years will probably be much larger.

Apart from finance, the tightest limiting factor in expanding child care through the Youth Aliyah will be in trained personnel for education and administration. The Youth Aliyah has found that it needs at least one trained Youth Leader or teacher for each 20 wards. It also needs other trained personnel. In view of this personnel limitation, it is unrealistic to think that—even if finance, maintenance supplies and housing were available—the Youth Aliyah could care for anything like 100,000 wards at the present time. Under favorable circumstances, a capacity to handle something over 20,000 may be attained late in 1946. The administration of the Youth Aliyah has well under way a training program to provide the personnel for this expanded scale of activities.

Before 1939 almost all Youth Aliyah wards were classified as "Youth", age 15 to 17. They stayed with the Youth Aliyah two years or, at most, three years. The new wards are increasingly "Children", age less than 15, and require longer periods of care. If the Youth Aliyah is actually to care for as many as 100,000 children during the next decade, their average age of reception must fall to 12 or 13 years and the average period of training be prolonged to at least 4 years.

The table on the next page records the Youth Aliyah experience of its maintenance costs, including general care, education, and medical attention, but excluding general administration.

It is the Youth Aliyah policy to avoid self-contained institutions as far as possible, so as to secure the healthier environment and lower costs of child care that are possible in close association with agricultural settlements. Due to efficient administration and due to the minimizing of costs through the integration of Youth Aliyah activities with the life of existing rural communities, the Youth Aliyah was able to keep its costs at a very low level in the prewar period. About £P 3.0 per month sufficed for average direct maintenance costs because practically all wards were old enough to be placed in groups associated with agricultural settlements, where they could contribute to their own support by their half-day of work (training). To this £P 3.0, however, at least £P 0.5 had to be added for other current costs.

YOUTH ALIYAH MAINTENANCE COSTS, PER WARD PER MONTH

	Average 1939	*End 1944*
Children below age 15, in agricultural settlements	None so placed	£P 9.0
Youth age 15 and up, in agricultural settlements	1st year £P 3.0 2nd year £P 2.5	1st year £P 4.0 2nd year £P 3.0
Wards, in self-contained institutions	£P 4.5	£P 11.0

Source: Youth Aliyah financial records summarized in unpublished memorandum of February 1, 1945, by Hans Beyth.

The wards who have entered the country during the war years have been younger. Now half are below the 15-year age line that, in Youth Aliyah parlance, separates "children" from "youths". Many of these wards have required special medical attention. They have been quite without clothing. Prices of consumption goods (apart from rents and other stable-priced services unimportant in Youth Aliyah expenditures) have tripled in Palestine. Prices of clothing have often more than tripled. Whereas an expenditure of £P 7 sufficed for the initial outfitting of a ward in 1939, in 1944 about £P 30 was required. Costs of direct maintenance have been kept down, particularly for the youth in agricultural settlements whose work is more valuable than formerly, but other costs have gone up. Hans Beyth, the able director of the Youth Aliyah, has calculated that, for a group consisting entirely of new arrivals in Palestine, it is necessary—at end of 1944 Palestinian prices—to budget about £P 138 per ward for total current costs during the first year in the country. This amount excludes all construction requirements.

Even should Palestinian prices fall to 50 percent above their 1939 level—the lowest point we think at all probable—the total current cost per ward would remain about £P 5.2 per month. This means, for an average 4-year training period, a total maintenance cost of about £P 250 per ward.

In addition to maintenance, children require transport to Palestine and housing in Palestine. The transport of children to the country may cost somewhat less than the transport of adults. But children without parents will have to be housed, for the period of their training, at public expense. The following has been the Youth Aliyah experience with the cost of housing and community facilities for its wards:

YOUTH ALIYAH HOUSING COSTS, PER CAPACITY FOR ONE WARD

	Average 1939	*End 1944*
In agricultural settlements	£P 25	For "youth" £P 65 For "children" £P 100
Near agricultural settlements	None built	£P 180
Increase of capacity of existing self-contained institutions	None built	£P 200
Erection of new self-contained institutions	£P 100	£P 300

Source: Youth Aliyah financial records summarized in unpublished memorandum of February 1, 1945, by Hans Beyth. Self-contained institutions are very small element of total.

These housing facilities are, of course, used by many wards in turn. Even 100,000 wards in training for an average of 4 years might never require a capacity of over 40,000 if their arrival in Palestine were spread over 10 years. Moreover, the Youth Aliyah has been locating its facilities with an eye to the usefulness of its buildings when the peak of Youth Aliyah activities shall have passed. The whole expense of construction need not, therefore, be regarded as exclusively a cost of special child care.

At the beginning of 1945, the administration of the Youth Aliyah—looking to its postwar responsibilities—made a careful plan for facilities for 17,700 additional wards. The basic idea of this plan is to concentrate new facilities in existing agricultural settlements, as far as possible, both to minimize costs and to create more normal living conditions than those experienced by children living in self-contained orphanages. At present Palestinian prices, the cost of this housing program is estimated by the Youth Aliyah at £P 2,281,000, or nearly £P 129 for capacity for a single ward. Some £P 50,000 more is required for the housing of "problem children" and about £P 100,000 for a special teacher training program. The total outlay involved therefore comes to £P 2,431,000. With the completion of this program, the Youth Aliyah will have a total capacity for about 22,000 wards.

In view of the very heavy maintenance outlays being borne at current prices and the construction projected at those prices, calculations in terms of a price level deflated to 50 percent above prewar have an air of unreality. The Youth Aliyah may, however, undertake considerable construction when prices have been deflated to a point near this level. At that point, facilities distributed like those now projected would cost about £P 60 for capacity for one ward.

This figure of £P 60 is comparable with our estimated maintenance cost of £P 250 and our rough conjectural transportation and other transit cost of £P 20. Assuming that any new housing would be used by about three different wards during the next 10 years and that the housing would have some value at the end of the period, we need allow perhaps only about £P 15 per ward for average housing costs. The sum of these three items of transportation, housing, and maintenance then becomes about £P 285, or about $1,140.

We do not believe that this figure of £P 285 or $1,140 has more than a rough suggestive value. It is intended only as an indication of the order of magnitude involved in the problem of bringing up orphaned children. These are not magnitudes which Jewish Palestine can bear alone. They must be recognized as the responsibility of world Jewry, of Germany which is primarily responsible for the orphaned or separated status of these children, and of the United Nations. The special contribution of Palestine can be a society eager to welcome these Jewish children as equals, to give them of its best human resources, and to bring them up in an organization capable of aiding them to grow as normally as possible until they are old enough to stand on their own feet. The result of this process will, of course, be that the children will—with rare exceptions—become firmly rooted in the Jewish National Home. Over and above simple charity, that is why Jewish Palestine is eager to receive them.

A different problem is posed by the older Jewish people who have been incapacitated for self-support by the hardships of recent years. Such of them as have relatives in Palestine may, of course, be welcomed by these relatives. The others must be recognized, even more than the orphaned children, as not distinctively a Palestinian problem. Unlike the children who will one day have human resources to contribute to Palestine's economic development, these older people will never be an economic asset. Palestine can give them a sympathetic atmosphere in which to live out their years, but it cannot afford to do so out of its own financial resources. As in all matters of Jewish relief, Palestine will no doubt bear its share. It cannot reasonably be asked to do more.

A METHOD OF IMMIGRATION CONTROL

It is generally agreed in Palestine that the "unlimited" Jewish immigration which Zionists place at the head of their program does not mean uncontrolled immigration. In asking for unlimited immigration, the more thoughtful Zionists mean to ask, first, for immigration unlimited by any conception of a "political high level" beyond which Jews will not be admitted into the country. They mean to ask, second, for immigration unlimited by any fixed conception of the total number of persons to whom Palestine will be able, in the long run, to afford an acceptable standard of living. In these senses of the word "unlimited", unlimited immigration is the basic premise assumed in our examination of the possibilities of economic development in Palestine during the next decade.

The acceptance of the principle of unlimited immigration, as defined above, does not mean acceptance of the view that all Jews should be admitted to Palestine irrespective of their physical and mental condition. It does not mean that immigrants should be admitted (except in special cases) without regard to the short-run economic condition of the country. From these points of view, control would continue to be necessary even after a general political and economic decision in favor of immigration.

During most of the 1920's and until the disturbances of 1936-37, the Government of Palestine in fact operated a kind of controlled immigration, unbound by any idea of a "political high level" or a final economic limit on the number of Jews who might, in the long run, enter Palestine. In practice, however,—and quite apart from the intrusion of any special crisis political considerations—this control system operated on a presumption against immigration. Quotas for working immigrants were set for six months forward, on the basis of information on particular job opportunities. But nobody in Palestine knew—any more than anybody would know in Britain or the United States—exactly how many new jobs would be created in a period six months forward. Except in a completely planned, self-contained economy, endowed with perfect foresight, forecasts of new job opportunities can never have the firmness of evidence required to satisfy a court of law.

Desire for a large immigration inevitably led to a certain amount of "faking" in the submission of evidence of job opportunities by the Jewish authorities. This naturally provoked a response by the British authorities in favor of extremely critical scrutiny of the evidence submitted. The net result was a stalemate accompanied by acute labor shortage in several years. The Jewish Agency "guaranteed" the existence of the jobs for which it requested labor immigration certificates. But the British authorities did not find this sufficiently restrictive. "I should have preferred," said the Director of Migration, in his testimony before the Royal Commission of 1936, "every employer giving a form of bond with conditions stated and financial penalties." That would have meant no immigration of laborers unless employers needed workers so badly that they were willing to assume financial penalties should business conditions change. In the actual circumstances of Palestine, it would have meant a dislocation of the wage structure and the employment of more illegal Arab and Jewish immigrants. But the Director of Migration expressed the situation candidly, "I do not satisfy the demand for labour at peak periods..."

The operation of the Palestinian system of controlling immigration in accordance with proven job opportunities, therefore, did not create a stimulating atmosphere for economic expansion. In spite of the unanimous willingness of Palestinian Jewish labor to welcome new immigrants, businessmen and farmers could not count on a continuously expanding labor supply and continuously expanding domestic markets. Immigration policy did not make its full contribution to creating optimum conditions for economic expansion.

We suggest that, in harmony with the idea of unlimited immigration as defined above, no proof of individual job openings be required in the future in advance of immigration into Palestine. The flow of immigration can be regulated more generally with reference to (a) the movement in the standard of living of employed persons, (b) the volume of unemployment, (c) the length of the period that immigrants remain under special care, and (d) the concentration of the economy on construction financed by capital imports.

So far as the standard of living of employed persons is concerned, it seems clear that a first principle of immigration policy should be that Jewish immigration should not create undue pressure on the standard of living of the Arabs now in the country. The Jews of Palestine would be perfectly prepared to accept this controlling principle since it is clear that Jewish immigration has raised the living standard of Palestine Arabs above that of neighboring countries and since the Jews are convinced that further Jewish immigration will lead to further Arab improvement. For illustration, the standard of living of the last five years of peace may be accepted as a reference base. Then this principle could be formulated in the following way: *Jewish immigration into Palestine must be checked if that immigration is shown to be causing a decline in the standard of living of Arabs now in Palestine below that which prevailed in 1935-39*. In time, the 1935-39 standard may come to be regarded as too low a reference point; if so, a new base would have to be established.

The trend of the living standard of employed Palestine Jews must also be given attention. This is a more complicated matter. At first examination, it may seem that if the Jews of Palestine are willing to accept a reduction of their living standard for the sake of bringing other Jews into the country, that is their business and concerns no one else. However, the potential immigrants, at the very least, are also concerned: they should have unbiased information on what they are coming to. Moreover Jews in other countries and all other peoples have a certain interest in this matter. If Jewish immigration into Palestine takes place to the accompaniment of a substantial decline in Jewish living standards there, the whole Palestine development may need reconsideration. A Jewish community as much as 25 percent poorer than the Jews of Palestine were in 1935-39 could hardly afford to educate its children or to preserve any cultural amenities. We suggest 15 percent below 1935-39 as a danger-signal, indicating undercapitalization, basic errors of economic direction, or the emergence of some disregarded natural limitation. But we are less concerned to establish the exact figure than the general principle. If our figure be accepted, for illustrative purposes, then our principle might be formulated: *Jewish immigration into Palestine must be checked if that immigration is shown to be causing a decline in Jewish living standards by more than 15 percent below that which prevailed in 1935-39.*

Consideration of the standard of living of employed persons needs to be supplemented by consideration of the volume of unemployment. How much unemployment should be considered to call for a "breathing space" to absorb the excess unemployed before allowing any new immigration? In the United States, during the years 1931-39, unemployment fell as low as 14 percent of the total labor force in only one year, 1937. In the boom year 1929, the number of unemployed was approximately 3 percent of the total labor force. Even in 1942, when the United States was already in the midst of her war effort, the unemployed averaged 4.5 percent of the total civilian labor force. Any economy always has a certain number of people between jobs because of seasonal factors, contraction in particular firms, displacement of particular products, and other similar causes. So long as the same people do not remain unemployed for long periods, so long as their basic needs while unemployed are covered by social insurance, and so long as the unemployment process does not become cumulative, a limited amount of unemployment is not necessarily a sign of economic weakness.

The absence of any unemployment—which is approximated during war and inflation—leads to rapid shifting of jobs and inflation of money wage rates and money profits. Such inflation of wage rates and profits, in an economy which must meet external competition, means the closing off of industries dependent on the lower wage structure and lower profit ratios. In an economy like that of Palestine the rigid maintenance of such inflated wage and profit structures means (other things being equal) a definite limitation of the further number of people who can be brought into the country. Therefore the elimination of unemployment, when imposed as a prerequisite of any immigration, tends to limit immigration possibilities not only in the short run but also in the long run. An economy with a public policy directed toward the maximum absorption of immigrants, as we presume Palestine's to be during the next decade, should always have sufficient immigration so that the number of temporarily unemployed does not fall much below, say, 5 percent of the total labor force.* In our judgment, a rise above 5 percent should be taken as a danger signal, but we are not as much interested in the particular figure as in the general principle. If the figure be accepted, at least for illustrative purposes, this principle becomes: *Jewish immigration into Palestine must be checked if unemployment shows a tendency to rise above 5 percent of that part of the labor force registerable as unemployed.*

As has been indicated above, in the next decade Palestine may have considerable numbers of special kinds of immigrants who are not of the age, or physical or mental condition to be employed. Control over the admission of such immigrants must be governed by reasonable assurance of the availability of financial resources, facilities, supplies and personnel to care for these special classes of immigrants. Once such resources are available, these special immigrants—not being part of the labor force—are not to be counted among the unemployed. It is quite possible that, particularly in the early years after the end of the war, there will also be a considerable number of immigrants who will need some months of rehabilitation before being in a physical and mental condition to enter the labor force. Such persons should be counted among the unemployed as soon as their physical and mental health has been restored.

A more serious problem of Palestinian immigration policy is raised by the suggestion of some Zionists that all the Jews of Europe (and some from other countries) be transported to Palestine in a space of 12 or 18 months, there to be held, for a period of several years, in special camps, pending their gradual absorption in the general economy of the country. One version of this special camp economy suggests that some individuals, for whom there were as yet no regular working places in the Palestinian general economy, would remain in these special camps for 10 years; another version reckons with 7 years.

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* We would, of course, include in our total labor force base for calculating the percentage of unemployed only those occupations where lack of work leads to a report of unemployment.

These ideas cannot be dismissed as mere products of Zionist fanaticism. They are a natural outgrowth of the war situation when, for Jews in Europe, any life outside the zone of Nazi power was the only alternative to death. These ideas also receive support from the difficulties currently being experienced by the remaining fragment of European Jewry. It is possible that, even in the post-war world, the authority of the United Nations will not be great enough to protect Jews from brutal persecution. Even today, when all its military power is at a maximum, the authority of the United Nations is not great enough to prevent the persecution of the Jews of the Yemen; it is not great enough to secure, for Jewish refugees, rights of transit across Iraq. If these things can be now, much worse is possible later. And if that worse fate eventuates—e.g., a pogrom in Iraq,—a policy of unlimited Jewish immigration into Palestine must mean that Jews will be free to enter the country even if the number of unemployed is thereby raised above the level that would otherwise be desirable. Such cases of brutal persecution must be provided for outside of any general formula of immigation control.

So long as control in the light of general economic considerations remains possible, however, one other criterion is relevant. That criterion is the success of the Palestinian economy in absorbing persons into occupations than can be expected to be permanent. This means, particularly, concern over any undue concentration of employment in construction financed by capital imports. So long as capital imports are available and so long as housing and other facilities are needed for a greatly expanded population, it is easy for an economy to give an appearance of prosperity. Construction bids away labor, management talent, and capital from the regular agricultural, manufacturing, and service occupations that must be the mainstays of economic life once the construction boom has passed. Prices of all productive factors rise, and manufacturers and farmers find that their costs are too high to compete with foreign products. They relinquish still more labor to feed the construction boom. When immigration tapers off and construction activity declines, a tardy effort is begun to master the manufacturing, agricultural, and other production and marketing problems that have been neglected during the construction boom. This readjustment may mean large-scale unemployment, business losses, and much lower wage rates. It may also mean, that, when a new pattern of more permanent occupations is found, a great deal of the previous construction activity is discovered to have been misplaced. Such might be the economic cycle of Palestine during the next decade if large-scale immigration and liberal capital imports should go along with the inflation of construction activity at the expense of other occupations.

It is clear that, no matter how explicit we attempt to make our criteria of immigration control, they will not lend themselves to summary in a formula susceptible of mechanical application. Immigration control will require the continuous review of facts in the light of general principles of policy. Therefore the locus of immigration control becomes a matter of the first importance. If a policy of unlimited immigration, in the sense defined above, be accepted as a basic principle of Palestinian development in the next decade, that policy will need to be administered by officers genuinely sympathetic to it. Not even a masterpiece of careful legal drafting can serve to bind an administration that does not wish to be bound.

So long as Palestine is under international administration, the international authority cannot avoid final responsibility for the control over immigration. However, to assure administration sympathetic to immigration and to develop Palestinian experience in responsible administration, a substantial initial immigration quota (say 250,000) might be turned over to the Jewish Agency. The Agency would be instructed to govern the rate at which it admitted immigrants by the above general principles and such further policies as it might consider necessary. All day-to-day discretion would be left to the Agency, subject to the obligation to submit full information on its acts to the international administration and subject to withdrawal of the Agency's authority in case of flagrant violation of the governing general principles.

IMMIGRATION AND POPULATION GROWTH

The above argument suggests a thoroughly experimental approach to the problem of how many immigrants Palestine should accept in the next decade. If the general outline of the argument be accepted, no advance determination of the number of immigrants to be admitted is required. No advance proof need be submitted of the individual jobs that immigrants would occupy. Immigration would be allowed to proceed so long as the standard of living, the volume of unemployment, and the distribution of occupations were satisfactory. Special classes of immigrants would be subject to control in accordance with their special status. In general, the presumption would be in favor of immigration. It would not be considered a great tragedy if a few thousand more immigrants were allowed into the country than would have been considered wise had there been perfect foresight.

In spite of this basically experimental approach to immigration policy, for many purposes it is useful to have some estimate of the possible number of immigrants during the next decade, however fallible such an estimate must be. Any estimate necessarily presumes limiting assumptions concerning the standard of living to be achieved, the supply of capital, world commercial policy, the extent to which Government policy functions to facilitate development, and many other factors. These assumptions and their economic consequences are developed in the subsequent chapters. It may be useful, however, to bring together here our conclusions in so far as they relate to immigration possibilities and the consequent total population growth.

As is inevitable from our approach to the problem of economic growth, these conclusions result not in a single figure for immigration but in a range of possibilities. This range indicates what seem to us to be upper and lower limits for expansion, under the conditions assumed. Under other assumptions, a higher or lower range of probabilities would have emerged. For instance, had we assumed —as is in fact done in some popular Zionist discussion—an unlimited supply of capital at no interest cost, there would have been no upper limit to our range. On the other hand, were we to assume a world boycott of Palestinian exports (or a complete absence of shipping to carry those exports) our present lower limit would be much too high. In a considerable measure, capital can be substituted for time: if Palestine is in a position to undertake public works in anticipation of later needs or to subsidize a wide range of economic activities, absorption of immigrants—at least in temporary occupations—may be more rapid than we have taken into consideration.

Under the assumptions developed in our subsequent chapters, it seems to us clearly possible for Palestine to absorb a net Jewish immigration of over 60,000 persons per year during the next 10 years. It may even be possible, under what we would regard as very favorable circumstances, to absorb as many as 110,000 per year.* This net immigration would be slightly lower, in percentage terms, than that experienced in Palestine during 1933-35 (see page 137); it is unparalleled at any other period.

We see no reason to believe that this immigration will proceed evenly from year to year. Nevertheless, to get some idea of the implicit demographic trend, we have assumed an even net inflow. In the following text table and in Table 12, the demographic consequences of our assumed net immigration are worked out for the lower and higher limits and for an intermediate assumption.

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* We have assumed a non-Jewish immigration of 10 percent of the total.

The implicit net immigration ratios used are 3 percent, 4 percent, and 5 percent per annum of the total population at the end of the preceding year. The implicit ratios are roughly three times as large in relation to the Jewish population alone at the beginning of the period but taper off as the share of Jews in the total rises.

ESTIMATED GROWTH OF PALESTINE POPULATION, 1944-54

(*In thousands*)

	Total population end 1954	*Jewish percent of total population end 1954*	*Total increase 1944-54*	*Increase due to Jewish immigration*		*Increase due to non-Jewish immigration*	
				Immigrants	*Natural increase of immigrants*	*Immigrants*	*Natural increase of immigrants*
No immigration	2,271	28.9	492				
3% per year immigration	2,987	43.5	1,208	616	26	68	6
4% per year immigration	3,269	47.4	1,490	860	35	96	8
5% per year immigration	3,576	51.0	1,798	1,125	45	125	10

In our projection of total population growth, we follow the analysis developed in Chapter 11, so far as the natural increase of the population now in the country is concerned. For natural increase among Jewish immigrants, however, we have assumed a rate of only 10 per thousand per annum; this reduction from the Palestinian rate results from the reported unbalance in the sex and age distribution of the surviving Jews of Europe, who must be an important component of any large Jewish immigration total. For non-Jewish immigrants we have assumed a natural increase of 20 per thousand per annum, the same rate as that projected for the present Christian population; a higher rate was rejected because of the large share of persons of Western origin in the probable non-Jewish immigration and because a comparatively large inflow from neighboring Moslem countries is likely to be accompanied by an excess of males among the Moslem immigrants. With these assumptions, total population growth shows the pattern summarized above. Annual figures are given in Table 12.

Even with the maximum net immigration that seems within the probably range of achievement, the Jewish population of Palestine would come to outnumber the non-Jewish only during the tenth year of unlimited immigration. If we hold the maximum net Jewish immigration constant and assume *no* net non-Jewish immigration, the Jews would become a majority during the ninth year.

TABLE 12: ESTIMATED POPULATION OF PALESTINE RESULTING FROM NATURAL INCREASE PLUS IMMIGRATION AT THE RATES OF 3, 4 AND 5 PERCENT OF RESIDENT POPULATION [1] 1945-54

(*In thousands*)

			Estimated population resulting from—					
	Natural increase alone [2]		*Natural increase plus immigration at rate of 3% of resident population* [4]		*Natural increase plus immigration at rate of 4%* [4]		*Natural increase plus immigration at rate of 5%* [4]	
Year	*Jews*	*Non-Jews*	*Jews*	*Non-Jews*	*Jews*	*Non-Jews*	*Jews*	*Non-Jews*
1944	565	1,214 [3]						
1945	574	1,249	623	1,255	640	1,256	656	1,258
1946	583	1,285	683	1,296	718	1,300	752	1,304
1947	591	1,322	746	1,339	800	1,345	854	1,352
1948	600	1,361	813	1,385	888	1,393	965	1,402
1949	609	1,400	883	1,431	982	1,442	1,084	1,454
1950	618	1,440	957	1,479	1,082	1,493	1,212	1,508
1951	628	1,482	1,037	1,529	1,189	1,546	1,350	1,565
1952	637	1,525	1,119	1,580	1,302	1,601	1,498	1,624
1953	647	1,569	1,207	1,634	1,423	1,658	1,657	1,685
1954	656	1,615	1,298	1,689	1,551	1,718	1,826	1,750

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[1] Including natural increase of that immigration.

[2] Rates of natural increase used are as follows: Moslems 3%; Others 3%; Christians 2%; Jews 1.5%.

[3] End of 1944 figures estimated on basis of third quarter 1944 figures.

[4] Includes natural increase of immigrants calculated at rate of 1% for Jews and 2% for non-Jews.

SUMMARY

It is the purpose of this survey to explore the possibilities of economic development in Palestine during the next decade on the assumption that Jewish immigration into that country will not be limited by political considerations. A great many facts that will be most important in determining the actual volume of immigration, should it be freed of political limitations, cannot be known with assurance now. Accordingly we suggest a thoroughly experimental approach to the problem of how many immigrants Palestine may be able to support at an acceptable standard of living. At the same time, we make some general estimates, which may be useful for current policy determinations.

1. The total number of Jews now alive in the world cannot be known with certainty. At V-E Day the probable number was about 11½ million.

2. No one can know how many of these Jews will need and desire to emigrate to Palestine during the next decade. We suggest, on the basis of factors now in play, that the most probable range is between 600,000 and 1,500,000 persons.

3. There is a sharp difference of view concerning whether large-scale Jewish immigration into Palestine will lead to non-Jewish emigration from the country. We reject the idea that there will be non-Jewish emigration. We suggest, on the contrary, that—unless non-Jewish immigration is checked—large-scale Jewish immigration is likely to cause roughly 10 percent as much non-Jewish immigration.

4. Due to uncertainties with respect to price levels, the countries from which immigrants will come, their age and condition, etc., it is difficult to estimate the cost of the services to Jewish immigrants that will be required in bringing them to Palestine and meeting transitional needs before they will generally be ready to be self-supporting members of Palestinian society. We nevertheless estimate these roughly at £P 50 or $200 per immigrant, in postwar prices, for immigrants not needing special prolonged care. For the million immigrants, in terms of which the Jewish Agency plans, this would mean $200,000,000.

5. The most important class of immigrants who will need special care that Palestine is especially well organized to provide consists of Jewish children orphaned or separated from parents, who will fall within the province of the Youth Aliyah. It is estimated that, on the average, these children will require an outlay of roughly £P 285 or $1,140, in postwar prices, for a 4-year period of care. It is not improbable that, out of a net Jewish immigration of 1 million persons, at least 50,000 would consist of children

requiring special care. If so, the net additional funds required would be of the order of $47,000,000.

6. In the past, Palestinian immigration controls have operated on a presumption against immigration. We outline control principles compatible with a general bias in favor of immigration. At the same time, we reject the idea that any automatic control formula can be devised that will operate well irrespective of the sympathies of its administrators.

7. On the basis of the assumptions and economic analysis presented in the subsequent chapters, we define the central range of net immigration possibilities for the next decade as falling between about 685,000 and 1,250,000. Of this total net immigration, between about 615,000 and 1,125,000 would be Jewish.

8. Due to the natural increase of the population now in Palestine, net immigration at the rate which seems possible, and the natural increase of the immigrants, a Jewish majority would emerge slowly if at all. Under our maximum assumption of gradual immigration in accordance with economic development possibilities, Jews would become a majority of the Palestinian population in the tenth year after the beginning of the development program. Should all non-Jewish immigration be eliminated, Jews would become a majority in the ninth year.

CHAPTER 23

WATER AND POWER POTENTIALITIES

GENERAL PROBLEMS IN WATER DEVELOPMENT

Water is a precious resource in Palestine. Yet the area under irrigation may be limited by factors other than the supply of water. The prospects for the utilization of water for irrigation cannot be considered apart from the prospects for agricultural production and the markets for farm commodities. Irrigation is a costly process, and—even though water may be available—it may not be economically useful. As we have observed in Chapter 13 above, only about ten percent of the exploitable water in Palestine is now being used. An effort will be made in this chapter to indicate the maximum possibilities, but the economic potentialities of water use can be determined only after the analysis of agricultural marketing possibilities made in Chapter 24 below.

As was indicated in Chapter 13, the development of water resources has not been well coordinated or efficiently organized. Even the limited coordination that could be achieved by local cooperatives, private water companies and the Palestine Electric Company has not been carried very far; most exploitation of water resources has been done by individual users. Reliance has been placed upon drilling of wells in the coastal plain, limited use of spring water in the Beisan and Jericho regions, and some pumping of river and lake waters. Despite the urgent need for water for irrigation, even these sources have been far from fully exploited. and there is ample evidence of wastefulness and hit-or-miss procedures.

In recent years, considerable progress has been made in the formulation of various comprehensive proposals for utilization of water and for maximizing irrigation of the land. Unfortunately, the Government has played a relatively minor part in the development of such schemes or in providing basic data for their creation. As a result, there are wide variations in the estimates of potential water resources and in the different plans to utilize these resources fully and efficiently. All of the comprehensive schemes have been designed by Jewish organizations.

A considerable degree of regulation and direction by Government will be essential if an integrated and effective program of water exploitation is to be accomplished. Waste of water and needless high costs, due to hit-or-miss borings and duplicated facilities, are inevitable without regulation. The right of expropriating land and right-of-way is absolutely necessary for any large-scale scheme. Land holdings will have to be shifted and control exercised over use of land and water if maximum use of both land and water is to be achieved. Sooner or later, therefore, a unified national water policy and Government control of water utilization and development must be established.

It is generally agreed among the experts that a prerequisite not only to the implementation of a total program but even to the preparation of adequate plans is the assembly of a vast amount of geological, hydrological, and topographical data. There is considerable information on rainfall; growing, but still scanty, data exist on run-off of the various rivers and wadis, losses through evaporation, location and flow of underground water, ground structures and rock formations, and soil condition. The work which has been done, especially by private groups, deserves commendation, but much more spade work must precede any very comprehensive undertaking with respect to water exploitation.

Too much emphasis cannot be placed upon the need for much more intensive research and field investigation. However, it should not be implied that no further expansion in irrigation is possible without prolonged research. The experts agree that many irrigation works can be undertaken almost at once. There are a great many local undertakings and initial stages of the larger projects, which lend themselves to prompt implementation without a great amount of study and research.

POTENTIAL IRRIGATION

Estimates of the total supply of water in the country that can be exploited for irrigation purposes vary considerably. It is generally agreed that between 250 and 300 million cubic meters of water per year are now being used for the irrigation of approximately 400,000 dunums.

The Water Research Bureau of the Jewish Agency has concluded that of the total of 8.3 billion cubic meters of water available in Palestine from rainfall plus the flow of the Yarmuk from outside sources, slightly more than 2.8 billion are usable for irrigation purposes and that this supply of water will serve to irrigate nearly 4 million dunums. This means an average water duty of 700 cubic meters per dunum per year. It is believed by many experts that excess water is being used and that the average for the country will be reduced well below 700 cubic meters. Overhead sprinklers may be used more widely, instead of basin and furrow irrigation, and this will also reduce the water duty per dunum.

On the basis of the Water Research Bureau's figures, the area under irrigation could be increased ten-fold. In the development of these estimates, various sections of the country were analyzed separately. The estimates of irrigable areas take into account limitations of both land and water. The report "Water Survey of Palestine, 1942," which presents these estimates, breaks down the figures for different sections of the country and for water supply from underground sources, springs, and run-off water. The data are presented in considerable detail. The basic information from which these estimates were derived are being subject to constant review and revision.

The Water Commissioner of Palestine, R. F. Jardine, made a speech in Cairo in February 1944, at which time he stated that if water were available an additional half million acres could be irrigated in Palestine, excluding the desert in the south. As to the availability of water for irrigation of this magnitude, there can be no doubt. This means an additional two million dunums or a total six times as large as the present irrigated area. This speech contained no figures on the supply of water.

The highest estimates of potential irrigation appear in a report, *The Water Resources of Palestine, Prospects of Irrigation and Hydro-Electric Development,* issued by the Mekeroth Water Company, Ltd., in 1944. This survey, prepared by the Mekeroth Water Company in consultation with Mr. S. Blass, indicated that a total of 4.3 billion cubic meters of water could be exploited to irrigate 8 million dunums. The estimates appear to be based on a series of extremely optimistic assumptions with respect to husbanding the rainfall and water flow. Many experts have expressed doubt as to the feasibility of the figures. It should be noted that this survey contemplates using 4 billion cubic meters of water from within Palestine and an additional 300 million cubic meters to be derived from the Litani River in the Lebanon.

The Commission on Palestine Surveys, an American organization, undertook in 1943 the preparation of a survey for the development of water for irrigation and hydro-electric power development in Palestine. After more than a year of work in the United States, Mr. James B. Hays, Chief Engineer for this project, spent several months in Palestine late in 1944 and early in 1945 completing the study. His most recently revised estimates indicate that 1.9 billion cubic meters of water from Palestine sources can be used in the country to irrigate 2.44 million dunums of land. An additional

473 million cubic meters can be obtained from the Litani River for irrigating an additional 450 thousand dunums in Palestine. This total project, therefore, provides for nearly 2.9 million dunums of land to be irrigated. When the present area under irrigation is included, the total is approximately 8 times the number of dunums now being cultivated under irrigation.

The Palestine Water Company prepared an estimate in 1944 indicating that a total of 2,350 million cubic meters of water, inclusive of the Litani, could be made available for irrigation in Palestine. It was concluded that this water could be used to put an additional 2.7 million dunums of land under cultivation, raising the total to 3.1 million dunums.

We thus find recent estimates varying from approximately 2½ million to 8 million dunums of land which can be irrigated by the available supply of water. As a result of intensive study of these various estimates and of conversations with most of the water experts in Palestine, it seems reasonable to conclude that a total of at least 3 to 4 million dunums could be brought under irrigation in Palestine within the next decade—providing that the capital is available for the construction of the irrigation works, labor to operate the farms, and adequate demand for the resulting farm output.

OUTLINE OF VARIOUS PROJECTS

1. The Commission on Palestine Surveys has developed a detailed report which indicates specific sources of water and the precise scheme for its utilization. In general, consistent with other proposals, it plans to accumulate surplus water in the northern part of the country, where rainfall or river flow is heaviest, and divert it to the southern part of the country where adequate land is available and where there is a great deficiency in water supply. In general, the Banyas, the Hasbani, and the Yarmuk Rivers, in the north, which flow into the Jordan, will supply a substantial surplus for diversion through reservoirs and canals. The water will be directed to the Valley of Esdraelon, the coastal plain, and the Negeb. This water now flows into the Dead Sea. To replace the diversion of the Jordan River and to provide for large hydroelectric development, it is proposed to divert water from the Mediterranean to the Dead Sea.

The irrigation waters of the north will be supplemented by the surplus of the Auja or Yarkon River, which flows into the Mediterranean just north of Tel Aviv, and by the flow from numerous wadis. These wadis yield a large but irregular flow of water during the heavy rainy season. This use of run-off water will be supplemented by a program for exploiting the underground water in the coastal plains through the use of wells, and by the use of spring water in the Beisan region and the Jordan Valley. The Hula Basin, including Lake Hula, will be drained, thereby reducing evaporation.

In January 1945, while still in Palestine, Mr. Hays submitted a brief report projecting irrigation of over 2.8 million dunums from Palestinian water sources plus an additional 700,000 dunums from the Litani River. A more recent report of Mr. Hays reduces the objective to 2.44 million dunums from water in Palestine and 450,000 dunums to be irrigated from the Litani. The canal will start at the Banyas River, pick up the Tel el-Qadi spring water, the Hasbani River at Tel Hai, and extend south and west. The Yarmuk is to be diverted to Lake Tiberias, providing for half of the Yarmuk flow, the other half going to Transjordan. The Sahl el Battauf would serve as a reservoir. The water would flow through a tunnel east of Mount Carmel and then along the east side of the coastal plain to the Negeb. The Yarkon River and Ras el Ein Spring surplus would be pumped into the canal. Drainage of the Hula Lake and Basin is contemplated. A dam across the Lower Jordan would divert the Jordan surplus to the land near Jericho. Dams and reservoirs would be constructed in suitable wadis. Spring and well water would be used locally, and some spring water would be pumped into the canals. A series of dams, reservoirs, tunnels, and canals is proposed for the utilization of the Litani, joining Palestine sources near Tel Hai. The project will ultimately be presented in great detail. All students of Palestinian water problems await Mr. Hays' final engineering report with great interest.

The project will lend itself to development in a number of stages. It would be possible to begin irrigation within one year. It has been proposed that the scheme be developed in ten different stages. As an illustration, Stage One would provide for the irrigation of 760,000 dunums and would consist of drilling wells to tap underground water, especially in the coastal plain and sand dunes. The Second Stage would utilize the water of the northern tributaries of the Jordan River and would serve to irrigate the Hula Basin and the Valley of Esdraelon. This would serve to irrigate about 540,000 dunums. Because of political considerations, the Litani project might come late in the total development.

In order to carry out this scheme, the Palestine Electric Company would have to give up its hydroelectric plant at Tel Or. However, the project encompasses a much larger hydro-power development through a series of dams at various places. It should be noted further that considerable power will be needed especially in the early stages, if main reliance is initially placed upon the use of wells. It is proposed that added facilities for steam power be provided immediately.

The figures on the total area which can be irrigated are derived on the assumption that flood and furrow processes for irrigation are used. There is evidence to indicate that land can be equally well irrigated by sprinklers with the use of less water than is required for flood and furrow. Optimists even suggest that sprinklers require only two-thirds as much water as other irrigation. If this saving should prove generally realizable, the number of dunums which could be irrigated with the same supply of water could be increased by as much as 50 percent. With the saving of one-third in water required, construction plus installation costs and annual charges per dunum would be about the same for overhead sprinklers as for flooding and furrow methods. Labor in irrigation would be reduced. Mr. Hays suggests that sprinklers be installed from the start on rolling and sandy lands and whenever desired in other lands.

There is some difference of opinion as to the wisdom of the Mediterranean-Dead Sea diversion. If the waters of the Jordan and its tributaries are diverted for irrigation purposes, the level of the Dead Sea will be lowered unless the Jordan flow is replaced by water from the Mediterranean. Some experts, especially Messrs. Vilentchuk and Moskowitz of the Palestine Water Company, are dubious about the feasibility or need for such replacement. They say that the southern portion of the Dead Sea is relatively shallow and that a moderate lowering of the level of the Dead Sea would greatly reduce the area of Sea. Thereafter, the amount of water evaporated would be substantially reduced and a new balance reached with a very much smaller flow from the Jordan. Both the Commission on Palestine Surveys and the Mekeroth projects, however, include the Mediterranean diversion. In one alternative of the former project, it is even suggested that, to get extra power, the flow from the Mediterranean be greater than the reduction in the Jordan flow, thereby raising the level of the Dead Sea. Dr. A. Werber has gone farther and suggests that such a project include a large transportation canal from Haifa via the Dead Sea to the Red Sea as an alternate route to the Suez Canal. This proposal would serve to replenish the Dead Sea, provide hydroelectric power, and furnish a new means of transportation should the Suez Canal be blocked to the British when its franchise ends in a couple of decades. All of these suggestions require further study.

2. The Palestine Water Company, Ltd., submitted a report to the Planning Committee of the Jewish Agency in May 1944,

prepared by I. Vilentchuck, indicating that a total of 2,350,000,000 cubic meters of water, including the Litani, could be made available for irrigation in Palestine within eight or nine years and could be used to put an addtional area of 2,400,000 dunums of Jewish land and 300,000 dunums of Arab land under irrigation. This estimate assumes that the Jews would have the right to all the water obtained through large-scale conservation and storage, as well as half of the water obtained locally from wells and springs.

This project is outlined in rather broad terms and its development is scheduled for three periods. The first period, which could be completed within two to three years, would rely primarily upon the use of well water from the coastal plain as well as on pumping from the Jordan and Yarmuk Rivers and the use of the Beisan Springs. These projects would yield sufficient water to irrigate 350,000 dunums of Jewish land. At least 250,000 dunums of Arab land could be irrigated from these sources. The second period would include projects to be completed between the fourth and sixth years and would make use of the water from the Yarkon River, storage of winter flow of water toward the Mediterranean, and drainage of the Huleh Basin. During this second period, an area of 290,000 dunums would be irrigated. The third period would include works to be completed between the seventh and ninth years. It contemplates use of the Upper Jordan sources with a central reservoir at Sahl el Battauf, water from the Jordan south of the Sea of Galilee, diversion of the Yarmuk, and use of the Litani River, all of which would provide sufficient water to irrigate 1,310,000 dunums of Jewish land. In addition to these three stages, it is proposed that spring water would be available for the irrigation of an additional 450,000 dunums for Jewish settlements.

3. The Palestine Water Company, Ltd. issued a report in January 1945, entitled *The Rapid Extension of Irrigation in Palestine* (*First Stage of a Country-wide Irrigation System*). This report deals only with the coastal plain from Tantura at the north to Rafa at the south. Water from wells, springs and wadis could provide 340,000,000 cubic meters for 515,000 dunums of Jewish-owned land. It is concluded that about 70 percent of the Jewish-owned land in the western part of the country could be economically supplied with water under this scheme. Some neighboring areas not in Jewish lands are included on the assumption that they may be purchased. It is stated in the report that this development could be undertaken and completed rapidly and could be made to fit in with the more comprehensive program requiring eight to ten years for completion. This rapid extension could be developed within one to three years.

It is further noted in the report that an additional 500,000 dunums of Jewish land not covered in this scheme could be irrigated rapidly and included technically in the first stage of development. This would include the Jordan Valley south of the Sea of Galilee, irrigated by water from the Jordan and Yarmuk Rivers; the Upper Hula and Beisan Valleys by water from local springs; and the coastal region north of Tantura by water from local springs and wells. These additional areas were apparently excluded from this report because of inadequate data or because work on these areas was being undertaken by other groups at the time this study was being made. Also not covered in the scheme are 400,000 dunums of Arab land in the coastal plain for which local water could be provided readily.

In this scheme, it is proposed to irrigate 250,000 dunums of additional Jewish land from wells in sandy formations in the western part of the coastal plain south of Tantura. Separate district irrigation systems, with an independent centralized water supply system in each such district, are believed desirable for every 10,000 to 15,000 dunums. About 400 to 450 new wells would have to be drilled. In addition, water from the Ras el Ein Springs and wells in the Turronian-Cenomanian formations would serve to irrigate 90,000 dunums of additional Jewish land in the central coastal region and 10,000 dunums in the south. Storage would have to be provided for excess water in the winter months and years of heavy rainfall. Without storage only about half these waters would be used. A large storage reservoir would be constructed in Wadi Ishkai with smaller reservoirs in other wadis and a main canal to the south. A very substantial conservation of water in the wadis is contemplated.

4. The report of the Mekeroth Water Company, Ltd., issued in May 1944, entitled *The Water Resources of Palestine, Prospects of Irrigation and Hydro-Electric Development,* did not attempt to develop a detailed scheme. Most of the report was taken up with justifying the conclusion that 4.3 billion cubic meters of water, including the Litani, could be conserved and used to irrigate 8 million dunums of land. However, there was a breakdown between local sources of water and that which could be derived from the "All-Palestine Project."

The All-Palestine Project is to be a unified large-scale undertaking including waters from the Liddani, Banyasi, and Hasbani Rivers which flow into the Jordan; the Hula floods; the Yarmuk River; the Litani River; and other flood waters. It is believed that this All-Palestine Project would provide 2.1 billion cubic meters of water per year and this water would be directed to the dry lands of the south. In addition to this unified project, the report indicates that 1.5 billion cubic meters of water could be derived from wells; an additional 450 million cubic meters could be taken from other perennial flows, mainly the Yarkon; and finally 250 million cubic meters could be supplied from local flood flows in the various wadis.

In addition to a breakdown by sources, the figures were broken down by types of project as follows: (1) All-Palestine Project, 2.1 billion cubic meters; (2) local water works, 800 million cubic meters; (3) regional water works, 930 million cubic meters; and (4) water works in the hills, 470 million cubic meters.

This project also proposes that water be diverted from the Mediterranean Sea to the Dead Sea for the purpose of power development and to offset the decreased flow into the Dead Sea as a result of the diversion of the fresh water from the Jordan River for irrigation purposes.

5. For the Mekeroth Water Company, Ltd., Mr. S. Blass prepared a memorandum in July 1944, entitled *First Stage of Development of Water Sources of Palestine.* This scheme provides water for between 400,000 and 500,000 dunums of land owned by the Jews. An attempt was made to confine the project to areas owned by Jews. It is indicated that the project can be completed within two years. Further, it involves no major political changes, relies primarily upon unexploited water, and will require only minor expropriation of land for rights of way. It was developed so as to fit in with the larger scheme for the entire country.

It suggests diversion of the Liddani River water by conduit and pipeline for irrigation in the Hula Region and in the Valley of Esdraelon. Further, it encompasses an extensive utilization of water through wells in the sand dunes along the southern coastal plain. Also a considerable amount of water is to be pumped from the Jordan River north of the Dead Sea, onto adjacent land. Finally, some trial borings are suggested in the Araba region below the Dead Sea. No large storage reservoirs are contemplated.

Representatives of the Mekeroth Water Company have suggested that in addition to this particular project it may be possible within two years to irrigate another 150,000 to 200,000 dunums by the use of springs and wells other than those in the dunes which are included in the above project.

6. In September 1943, the Palestine Water Company issued a report on its Litani project. It was proposed that the waste water of the Litani River, which is in Lebanon and does not flow anywhere in Palestine, be diverted for use in Palestine. Although the project was spelled out in considerable detail and was predicated on considerable research, including the work of Dr. A. Werber, it was

indicated that an additional £P 100,000 would have to be spent for surveys and tests for accuracy and detail before the project could be undertaken. It was believed that this preliminary work could be completed within 18 months. Dr. Werber's report as submitted to the Palestine Water Company reviewed various alternative possibilities of diverting the Litani water into Palestine.

This project includes not only the waste water not usable in Lebanon from the Litani but also the Hasbani River. In computing costs of water and power derived from this project, provision was made for a royalty to the Government of Lebanon for each cubic meter of water and kilowatt hour of electricity. It was suggested that sufficient water could be obtained to irrigate 725,000 dunums in Palestine. Four large reservoirs are included in the scheme, one of which is proposed within the boundaries of Palestine in the Sahl el Battauf. From there, a canal would lead to the areas to be irrigated. These areas to be irrigated include the Upper and Lower Galilee, the Valley of Jezreel and the Valley of Esdraelon and the plain above Haifa. The amount of water which would be diverted to Palestine is estimated at 510 million cubic meters. The land under consideration for irrigation included 42 percent under Jewish ownership and 58 percent under Arab ownership. It was suggested that the project could be completed in six years from the beginning of construction, with some of the irrigation beginning within the first year.

7. The Hula Reclamation Project has been under study for some time. Its purpose is to drain, irrigate, and provide a power plant in the 175 square kilometer bowl forming the headwaters of the Jordan. The Hula Basin is a triangular area consisting of the Hula lake and marshes, a cultivated plain north of the marshes, and a rather steeply sloping area at the foot of the hills in the north. In addition to the three rivers, the Hasbani, Liddani, and Banyas, which run through the northern part of the valley and unite to form the River Jordan in the center of the plain, there are a number of springs and wadis in the area. It is estimated that of the approximately 160 thousand dunums in this area, 100 thousand could be irrigated; at the present time 20 to 25 thousand are already being irrigated, 7 thousand dunums by Jews.

In 1934 the Palestine Land Development Company, the land-buying group of the Jewish institutions, bought the concession to drain and irrigate about 57 thousand dunums of the Hula basin from a Turkish company for £P 192,000, after the latter had held it for 16 years without taking any action. It was decided that part of the area outside the concession, the most malarious tract in Palestine, should also be drained, with the Government financing the work to the extent of £P 235,000. The area covered by the concession comprises 56,940 dunums, of which 16,919 are lake, 21,453 marsh, and 18,568 land. Most of the land area, although flooded in the winter, is cultivated by Arabs from the neighboring villages. Within the concession area, 15,772 dunums have been reserved for Arabs, 6,440 will be occupied by embankments, channels, etc., and 34,728 dunums will be available for Jewish colonization.

After the area is drained, an indeterminate amount of peat must be removed from the soil before it can be used for agricultural purposes. This peat could be used for fertilizer, for building purposes, or for coke, although this latter alternative would be expensive and require further experimentation.

The Government delayed the completion of financial arrangements for its share of the cost until the war interfered. The Palestine Land Development Company is ready to proceed. They estimate that the scheme could be undertaken in a few months and carried out in three to four years. If the area set aside for Jewish colonization bears the entire cost of the project, it will cost £P 24 to £P 30 per dunum, at prewar prices. The Hula scheme should be tied in with any larger countrywide irrigation project which is undertaken. It should not be carried out until at least one year after all water outside the lake and marshes has been removed and put to use, since it would take a year of observation after that to determine what drainage system to use.

Summary of Proposals

Since we lack the technical competence to make an engineering appraisal of the proposals, no attempt will be made here to suggest which scheme might be most feasible. It should be noted, however, that there is much consistency in many aspects of the various plans. Of particular interest is the fact that every project which has been suggested lends itself to development in a number of semi-independent stages. Thus it is not necessary to think exclusively in terms of an over-all irrigation program for the potential 3 to 4 million dunums for which water can be provided. Instead, it is possible to proceed step by step in accordance with needs and financial resources. This is particularly significant in view of the fact that the analysis of agricultural development in Palestine indicates that considerably less than the maximum irrigation possibilities are likely to be needed in the next decade.

It is of special importance to note that a considerable expansion of irrigation is possible through local exploitation of underground water, pumping of water from rivers and lakes, and the building of a series of dams in various wadis. It is almost certain that during the next five years, even with an immigration of 110,000 Jews per year, all of the necessary water can be supplied from wells, springs, wadis, and local use perennial flows. These local sources would apparently permit a four to five-fold increase in irrigated area raising the total to from 1.5 to 2 million dunums of land. It is extremely unlikely that a total irrigated area larger than this will be economically usable in the next five years. Indeed it is quite possible that it will suffice for a decade.

In his first plan, made while still in the United States, Mr. Hays developed only the scheme for diverting surplus waters of the north to irrigate about 1.3 million dunums of land in the Valley of Esdraelon, Upper and Lower Jordan Valleys, and the Negeb. In his latest report, however, Mr. Hays proposes to irrigate over 1.3 million dunums of land from wells and wadis. In view of this prospect, there would appear to be no fundamental reason for rushing a large-scale project whereby the water would be brought from the north to the south.

This conclusion, however, must be qualified by the fact that development of irrigation projects in the coastal plain and in other areas adjacent to springs or rivers will depend upon the transfer of land from Arabs to Jews, and this raises political implications. It is likely that land in the Negeb will be more accessible for Jewish projects than will land elsewhere, especially in the coastal plain where much additional fresh water can be pumped from underground sources. Considerable land in the northern highlands might be sold to the Jews and subjected to intensive development and irrigation, but only if the large project is undertaken. Moreover some surplus of irrigated land over proven needs would be useful in Palestine, to exert a downward pressure on inflated agricultural land values.

Some development in the Negeb, on a moderate scale, is possible in the near future through diverting the water from the Yarkon River and Ras el Ein Spring. This source can be supplemented by water stored in the wadis all up and down the coastal plain. It is still too early to appraise the success of the dam in the Wadi Asluj. There is considerable optimism among experts, however, as to the possibility of conserving the water in the various wadis. Even if this water cannot be stored for year-round use, it can serve to irrigate much land throughout the winter season. The irregularity of rainfall in the south, even in the winter months, makes it difficult to develop winter crops of high value.

On the whole, it may be concluded that sufficient work has now been done in Palestine to undertake a considerable irrigation development project. While the initial stages which are now reasonably well established are being undertaken, the further geological, hydrological and topographic work necessary for the large-scale projects should be carried forward on a wide front.

COSTS OF GENERAL CONSTRUCTION AND FIELD INSTALLATIONS

For several of the schemes outlined in the previous section, no cost data are available. For others it is apparent that the cost figures are only rough approximations. Even the most detailed and carefully considered estimates available are much less precise than any which a contractor would prepare even on a cost-plus basis. Until more accurate underlying data are assembled and the working blueprints of construction designs are completed, it is impossible to utilize the estimates as a basis for operations. However, since the estimates represent the best judgments of the experts who have worked on the problem in Palestine, they will be utilized for the present purposes.

Several of the general water plans exclude the cost of local field installations for distribution of water, i. e., secondary pipes, furrows, sprinklers, and other field conveyances and distribution installations. In the Litani project of the Palestine Water Company, the local installations were estimated at £P 3 per dunum (prewar prices). In the Mekeroth scheme they were estimated at £P 7.5 per dunum (prewar prices). For an orange grove, Dr. Goldschmidt (of the Government water research service) arrived at a cost of about £P 5.5 per dunum. Estimates of field installation costs per dunum (all prewar prices) are presented for six crops in Table 8 (page 205). Requirements for fodder vary from £P 3.5 per dunum without sprinklers to £P 7.0 per dunum with sprinklers. Requirements for vegetables are £P 3.5 without and £P 8.0 with sprinklers. The other four crops, all without sprinklers, are estimated at £P 9.0 for citrus, £P 6.7 for deciduous fruit, £P 6.0 for grapes, and £P 3.0 for bananas. These are costs on Jewish farms; costs on Arab farms are lower. Allowing for the weight of citrus in the irrigated total, but excluding the use of sprinklers, £P 5 per dunum may be taken as an extremely rough basis.

In accordance with its most recent plans, following the field studies by Mr. Hays in Palestine, the Commission on Palestine Surveys estimated that the construction cost for its irrigation project was slightly more than $230 million (at prewar prices) for a total of 2,890,000 dunums. This equals roughly £P 50 million.* or approximately £P 17.3 per dunum. The irrigation project is linked with a substantial hydroelectric power development. There is no indication in the report as to the basis for the breakdown of costs between power and irrigation. Presumably, the apportionment is primarily on the basis of actual costs in relation to each phase of the work although some assumptions for joint projects must have been made in the allocation of expenditures. If £P 5 per dunum is added for local installations and if postwar £P costs are assumed to be 50 percent above prewar prices, the project would cost £P 33.5 per dunum ($134) and a total of £P 97 million for the entire 2,890,000 dunums to be irrigated. This cost per dunum is equal to $536 per acre; the total may be expressed as very roughly $400 million.

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* Prewar dollars converted into £P at 4.8 to 1. £P totals should be raised by 50 percent to yield postwar prices but dollar totals by only 25 percent. See Chapter 28.

In the first stage of this project, a total of 760,000 dunums will be irrigated at an average prewar cost of $28, or £P 5.83 per dunum. This is the lowest price for any of the stages; the small cost reflects the fact that this first step is confined to drilling wells to tap underground waters. Adding local installation costs and allowing for a 50 percent increase in £P prices, the average would be £P 16.25 per dunum. This project alone would require an outlay of £P 12,350,000. The second stage, which utilizes the water of the tributaries of the Jordan for irrigating 540,000 dunums in the Hula Basin, part of Lower Galilee, and the Valley of Esdraelon, would cost $60 or £P 12.5 per dunum at prewar prices, excluding internal installations. The stage which contemplates using water in the wadis, springs, and rivers in the coastal plain would have a prewar cost of $127 or £P 26.46 per dunum for 460,000 dunums. The average cost for the other stages varies from $61.50 per dunum to $195 per dunum, to which local installations must be added and an allowance made for higher prices.

In the Palestine Water Company's project for the Litani, which would provide water for 725,000 dunums in Palestine, it was estimated that the total cost would be £P 10,110,000, of which £P 7,530,000 is allocated to irrigation and the balance to power development. The average construction cost per dunum for irrigation was £P 10.4. To this figure we add £P 5 for internal installations, making a total of £P 15.4 per dunum. These represent prewar costs and if adjusted on the assumption of a 50 per cent increase in postwar costs, the total outlay for irrigation would be approximately £P 16,750,000 and £P 23.1 per dunum.

No cost data were developed for the over-all project of the Palestine Water Company, which was designated to irrigate 2,700,000 dunums. However, in the proposal of that company to irrigate 515,000 dunums of Jewish-owned land from wells and wadis in the coastal plain, the total construction cost was £P 6,475,000, or an average of £P 12.573 per dunum, at prewar prices. For wells alone the Palestine Water Company arrived at a prewar cost of £P 7 per dunum in the coastal plain and £P 14 per dunum in the Turonian-Cenomanian formations.

It is estimated that the Mekeroth Water Company project, designed to provide irrigation for 8 million dunums, would cost, at prewar prices, approximately £P 170 million, or an average slightly more than £P 21 per dunum. This includes an estimate of £P 7.5 per dunum for local installations, leaving £P 13.5 per dunum for all other costs. This is about 20 percent lower than the estimated average construction cost on the much more limited (2.9 million dunum) recent Palestine Surveys Commission project. The estimates of the Palestine Surveys Commission inspire greater confidence because they are in much greater detail and appear to be much more carefully prepared.

The first stage of development, as suggested by the Mekeroth Water Company. would provide for some 400,000 to 500,000 dunums at a cost of approximately £P 10 per dunum, at prewar prices, excluding internal installations.

These are the only cost figures available for the various projects. For some of the schemes no costs were computed. It should be noted that for those projects which suggest development by successive stages, the costs for the initial stages are generally lower than the average for the total project. The estimates of Mr. Hays for Palestine Surveys appear to justify the greatest confidence, although these are also subject to revision.

It is not too safe to generalize from these various figures, but it would appear reasonable to conclude that a figure of £P 35 per dunum at postwar costs, assuming a 50 percent increase above prewar levels, and including local distribution, indicates the rough order of the magnitude of the capital required for the irrigation of 3 million dunums over the next decade. This would represent a total outlay of £P 105 million. It also appears likely that at least 1.3 million dunums could be irrigated in the first five years at an average cost of about £P 20 per dunum or a total outlay of £P 26 million. These are obviously rough approximations; exact costs would depend upon the nature of the projects. Chapter 24 below suggests that the economic requirements for irrigated land during the next decade are likely to be of the maximum order of 1,750,000 dunums. On the basis of existing projects, such an area might be irrigated with an outlay of about £P 24 per dunum, or a total outlay of the order of £P 42 million.

Even at a prewar average of £P 12.5 per dunum or roughly £P 50 ($240) per acre, excluding local installations, the cost in

Palestine is very high in comparison with the United States. The average construction cost per irrigated acre for main distribution on all United States Bureau of Reclamation irrigation projects operating in 1941 was $75. Costs ranged on different projects from as low as $11.26 to as much as $271 per acre. For coastal plain irrigation from wells in Palestine, the average of $134 per acre does not compare too unfavorably. These comparisons are not too meaningful without a clear understanding of allocations of costs between irrigation and power. In the United States, public policy has favored the farmer, with relatively large allocations to power (as well as flood control and other non-income-earning purposes), and relatively less to irrigation. There is as yet no policy established on this matter in Palestine.

UNIT COSTS OF IRRIGATION WATER

The available estimates of the cost of water per cubic meter present the charges to farmers up to the point of distribution within the farming unit. No attempt will be made here to estimate the operating cost of distributing water within the farm.

Figures of water costs on a per cubic meter basis must be used with caution. The water duty, i.e. cubic meters required per dunum, varies greatly depending on the location of the farm and the crop. In the cool and rainy mountains less water per dunum is required than in the warmer and drier coastal plain. In turn, more water is required in the Jordan Valley than in the coastal plain because of higher temperatures. While extensive experience is lacking on which to base conclusive judgments, many experts are optimistic about the relatively low duty of water likely to be required in the Negeb. Despite high summer temperatures, there are cool nights, much dew, and the soil is of the loess type tending to retain moisture.

It is estimated by Mr. Hays in his most recent report to the Commission on Palestine Surveys that water for the entire project could be sold for an average prewar cost of 0.9 of a United States cent per cubic meter. Since these figures are based on construction costs at prewar figures and higher prices for construction are contemplated for the postwar years, they must be adjusted upward in the cost of water. Likewise operations and maintenance costs will probably be correspondingly higher. For want of a better basis of adjustment, we shall assume that the anticipated 50 percent increase in cost of construction and in the general price level will bring a corresponding increase in the cost of water. That would mean 1.125 U. S. cents or 2.8125 Palestine mils per cubic meter of water. With an average duty of 700 c.m. per dunum, the total charges would be £P 1.96875 per dunum. The same unit cost is applied to each stage of development in Mr. Hays' report. Obviously, the rates necessary to meet operational and overhead costs would vary for each stage. Further, the assumption as to rates of interest and period of amortization are not spelled out.

In an earlier version of the project, Mr. Hays suggested that water might be sold at 2 prewar mils, based on a 4 percent rate of interest and an amortization period of 50 years. This compares favorably with older costs in Southern California, where computations up to 1930 indicated a price per cubic meter of water ranging from 2.2 Palestine mils to 3.05 mils. However, a much less favorable comparison is revealed when some of the United States Bureau of Reclamation projects are studied. On 18 projects, not necessarily typical, the charges collected averaged $3.15 per acre irrigated. Even at 2 mils per cubic meter and a duty of 700 cubic meters per dunum, the prewar cost per acre in Palestine would total over $26.88. At a 2.8125 mils rate, the cost would be over $31.50. In one perspective, this comparison is unfair in that considerable subsidies are involved in the U.S. projects; in another perspective, however, it is very important as indicating the comparative costs that will probably have to be borne by Palestine agriculture.

As compared with present rates in Palestine, the proposed charges would be no higher in most instances and much lower in many cases. Mr. Goldschmidt of the Palestine Government studied a pumping installation as far back as 1936 and arrived at a water cost of from £P 2.05 to £P 2.23 per dunum at prewar costs. In 1938 he proposed a 12,000 dunum scheme with water costs of £P 2.166 per dunum at prewar prices. Water costs in Palestine before the war probably averaged around 3 mils per cubic meter in the coastal plain and less in the Hula Basin and Jordan Valley.

In the Litani Project of the Palestine Water Company, it was estimated that the prewar water cost at the main distribution channel would be 1.4 mils per cubic meter. This is almost 25 percent below the estimate for the much larger project envisioned by Mr. Hays. On the basis of a £P 3 cost per dunum for local distribution, which is probably too low even at prewar costs, the Litani report indicates a local distribution cost of 0.42 mil per dunum. Interest was figured at 4 percent and amortization over 50 years except for the local installations, for which 25-year amortization was allowed. A royalty of 0.4 mil per cubic meter to the Government of Lebanon was included.

In the Palestine Water Company proposal for the rapid irrigation of 515,000 dunums, it was estimated that the cost of water (presumably at prewar prices) would vary from 1.8 mils to 3.1 mils per cubic meter. The average is considerably higher than the prewar costs resulting from the estimates of Mr. Hays. Water duty would vary from 400 cubic meters to 1,000 cubic meters per dunum and the total water cost per dunum would vary from £P 1.4 to £P 1.8. Since the highest water duties would be required in areas where the construction involved is comparatively simple, this project comes out much cheaper comparatively on a per dunum basis than on a per cubic meter basis.

In the Mekeroth Company plan for irrigating 8 million dunums, the water rates are designed to vary from 2.5 mils to 8.0 mils per cubic meter for the different categories of projects. The highest figure applies to irrigation in the hill country and the lowest figure to the All-Palestine Project. An average of about 3.8 mils per cubic meter (presumably at prewar prices) was estimated for the entire project. These costs include local distribution installations, for which £P 7.5 per dunum were allowed. As indicated above, these estimates cannot be regarded as firmly founded. In the short term scheme of the Mekeroth Company for irrigating 400,000 to 500,000 dunums, Mr. Blass estimated that costs would vary from 1.0 mils to 3.5 mils per cubic meter.

Power is a very important element in determining the cost of water. An analysis made by Mr. Vilentchuk and Mr. Moskowitz of the Palestine Water Company showed that power accounted for 70 percent of all operating costs in obtaining water from wells. The share would be lower for large-scale irrigation projects using the rivers. Certainly, however, lower power costs would mean lower water rates. The Palestine Electric Company does favor irrigation, as evidenced by the fact that irrigation accounts for one-third of power consumption and only one-eighth of revenue. Yet, the cost of electricity per KWH for irrigation is about 60 percent above the United States rates.

While the data do not lend themselves to precise conclusions, broadly speaking, the schemes up to the point of 3,000,000 additional irrigated dunums probably do not involve any substantial alteration of the cost structure found today in representative irrigated farms. With respect to still larger schemes, both engineering and cost information is as yet too poor to justify any judgment. With respect to certain smaller schemes (up to say an additional irrigation of 1.3 million dunums) a substantial reduction in water costs below current ones is apparently achievable. The ability of agriculture to meet the various charges involved in both smaller and larger schemes will depend largely on the type of crops grown, which in turn will depend upon markets. Water rates can be reduced if the price of oil and therefore of power is reduced or if low-cost hydroelectric schemes are developed. More economical use of water will result from further experience, thus lowering the water duty and the cost of water per dunum irrigated. Given the requisite supply of capital, prospects on the whole appear favorable to a marked expansion in irrigation.

HYDROELECTRIC PROJECTS

Most of the schemes which envisage the diversion of the waters from the northern to the southern parts of Palestine suggest the coordination of water utilization for irrigation and for the generation of hydroelectric power. The sources of water in the north are at a much higher altitude than the principal areas requiring water for irrigation, namely the Negeb, coastal plain, Valley of Esdraelon, and Jordan Valley. Reservoirs serve not only to store the surplus waters of the rainy season and thereby assure a regular supply for agricultural purposes, but also to provide a continuous flow for the generation of power.

In its most recent version of a comprehensive irrigation and power development, the Commission on Palestine Surveys proposes to build 228,300 kilowatts of hydroelectric capacity, which would permit the sale of approximately 875 million kilowatt hours.* Nearly 60 percent, or 130,000 KW capacity, of the total would be accounted for by the diversion of the waters of the Mediterranean to the Dead Sea, the surface of which is 392 meters below sea level. The next largest source would be the Litani River development, which would provide a generating capacity of 73,600 KW. Finally, a large dam and power plant on the Hasbani River, near Ibeles Saki would yield a capacity of 23,000 KW and a small power plant of 1,700 KW is proposed at Sahl el Battauf.

Of the total of 875 million KWH per year made available for sale by the entire project, 450 million KWH would be derived from the Dead Sea diversion, 340 million KWH from the Litani project, and the remaining 85 million from joint irrigation-power projects in Palestine. Apparently the power required for pumping water from the Mediterranean over the intervening highlands has already been deducted.

A variety of plans has been suggested for the Mediterranean diversion. They propose a series of canals, tunnels and open cuts through which the sea water would be pumped to appropriate dam and storage basins and then dropped along the Jordan Valley to the Dead Sea. In one plan it was proposed to establish a large power plant at Wadi Fara and another at the northwest end of the Dead Sea. Some of these plans would allow some fall in the level of the Dead Sea. Others would raise the level of the Dead Sea by as much as 17 meters. The schemes that allow the level of the sea to fall naturally produce comparatively little power. Those involving a rise would necessitate moving the works of the Palestine Potash Company from the present shore of the Dead Sea to a higher location but would produce more power. Four alternative versions of the diversion scheme would provide installed capacity of 75,000 KW, 84,300 KW, 120,800 KW, and 130,000 KW. The choice among these alternatives must be governed by consideration of the magnitude of the investments involved and the possibility of securing cheap thermal power through a reduction in fuel costs.

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* Each KW capacity is theoretically capable of furnishing 8,760 kilowatt hours of power per year; the actual amount furnished depends on the load factor. Recent correspondence with Mr. Hays indicates an upward revision to 240,000 KW capacity and 1,020,000 KWH output.

The Litani project of the Palestine Water Company includes three major hydroelectric plants with a total capacity of 90,000 KW. Allowing for an over-all coefficient of .53 to represent the relationship between the potential energy from the water flow and the energy output obtainable at the end of 80 kilometers of high tension line, the report estimates that 275 million KWH can be generated. A 39 percent load factor is assumed. In the first report of the Commission on Palestine Surveys, it appears that a load factor of 61.2 percent was estimated. That there is still a substantial difference in estimates of transmission loss and load factor is evidenced by the fact that 275 million KWH is related to 90,000 KW capacity in the Litani project whereas 340 million KWH is related to 73,600 KW capacity in the latest revision of the Palestine Surveys Commission report by Mr. Hays.

The Mekeroth scheme for irrigating 8 million dunums proposes to yield 1,500 million KWH per year. The water from the Mediterranean is to be diverted from Acre on the coast to the north of Lake Tiberias. There would be eight power stations from there to the Dead Sea. A total of 1,680 million KWH would be generated per year, of which 180 million KWH would be needed for raising water and as a reserve, leaving the 1,500 million KWH for other purposes. An analysis by Mr. Blass appears in this Mekeroth report showing a total power demand for all irrigation purposes of 800 million KWH. This means that more than half of the net power generated by the project would be used for irrigation. It should be remembered that this scheme proposes from two to three times as much irrigated area as do other projects. The estimated power needs for irrigation are likewise greater, since the energy required for pumping and distributing water is related to the amount of water used and area irrigated. The large-scale Mekeroth plans, however, are at present on too sketchy a basis to merit any but the most general consideration.

The existing electric capacity of Palestine will permit the sale of less than 200 million KWH per year at a load factor of 30 percent. However, if the load factor could be raised to 50 percent, about 300 million KWH could be sold.* This total cannot be added to the new projects since any major diversion of water from the Upper Jordan region will mean the end of the present hydroelectric plant at Tel Or. At least 150 million KWH (at a 30 percent load factor) can be accounted for by the steam-turbine stations at Haifa and Tel Aviv and the diesel engined power station at Jerusalem. This total can be added to the new projects. If we accept the estimates of Mr. Hays, the completion of his project would make available a total of slightly over one billion KWH per year, provided that a load factor of 50 percent were attained for the average of all facilities. If the Mediterranean-Dead Sea diversion were not undertaken—the level of the Dea Sea being allowed to fall—a total of nearly 600 million KWH would be available for sale annually. If only the Litani project, as planned by the Palestine Water Company, were implemented, nearly 500 million KWH could be sold per year. Thus, we may conclude that additional hydroelectric development plus the raising of the load factor to 50 percent can increase the electric power available in Palestine from two and a half to five times the present supply. (The Mekeroth proposal allows an even greater increase, but we have excluded that from present consideration.)

In addition, there are the possibilities of expanding the supply of energy through the use of oil. Mr. Hays suggests that at least 50,000 KW of additional capacity in oil-fired steam power will be required in the first few years to meet the demand before the hydroelectric projects can come in. The initial installation costs of thermal power are much lower than those for hydroelectric. Particularly in the case of capital scarcity, therefore, much of the initial power expansion may be based on fuel rather than water.

COSTS OF POWER CONSTRUCTION

Mr. Hays has estimated that the installation costs for the 228,300 KW capacity included in the Palestine Surveys Commission project would total $62,740,000 (at prewar prices). This represents approximately £P 13,070,000, or £P 57 per installed KW. For the Mediterranean-Dead Sea diversion the average is £P 71 as compared with £P 36 for the Litani-Hasbani projects.† If we assume that prices in the postwar period will be 50 percent above prewar in £P, the total scheme will require an outlay of roughly £P 19,600,000 and an average of about £P 85 per KW.

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* Assumes a transmission loss of 12 percent and a distribution loss of 10 percent.

† Recent correspondence with Mr. Hays indicates a moderately lower cost per KW for the Mediterranean-Dead Sea diversion and higher cost for the Litani-Hasbani project.

The Palestine Water Company estimated the power construction cost for the Litani project at £P 28 per installed KW, at prewar prices. This is 50 percent below the average for the total Hays' project and almost 25 percent below the Hays' proposal for the Litani-Hasbani project. The divergence is even greater than the apparent one because the Litani project is supposed to include the cost of transmission lines whereas the Hays estimates are exclusive of transmission and distribution outlays.

Based on experience in the United States, with rough adjustments for conditions in Palestine, capital outlays of $100 (£P 21) per installed KW of capacity for transmission and $200 (£P 42) for distribution will be required in Palestine at prewar prices. This would bring the total cost of the Hays plan to about £P 120 per installed KW capacity at prewar prices. At a £P price index 50 percent above prewar, the total project of 228,300 KW capacity would cost about £P 41 million. The Litani project, with 90,000 KW capacity, would call for a total outlay of roughly £P 9,450,000 at such a price level. We must emphasize, however, that these totals have only a very rough suggestive value. Neither the engineering nor the cost estimating has been done with such detail and care as are required for firm operating purposes.

Comparison of construction outlays for generating facilities at prewar prices in Palestine and in the United States yields encouraging results. As compared with the prewar cost of £P 57 for the entire Hays project, the £P 36 for the Litani-Hasbani segment of Mr. Hays scheme, and the £P 28 for the Litani project of the Palestine Water Company, the following facilities costs are found for the United States: at Boulder Dam, $107 (£P 22.3) per KW, and at the proposed Missouri Valley Basin, $366 (£P 86.25) per KW. Both generation and transmission facilities at the Tennessee Valley Authority cost $211 (£P 44) per installed KW. Estimates vary widely between projects, but on the whole the Palestine power projects are not unduly high-cost undertakings. There is a tendency in the United States to favor irrigation by a relatively heavy allocation of costs on joint projects to power functions.

Public policy with respect to this issue has not yet been formulated in Palestine, but special consideration of farming and irrigation is likely and may, therefore, mean higher cost allocations for power installations.

UNIT COSTS FOR POWER

There is a wide difference of opinion in Palestine with respect to the use of energy developed from oil, compared with hydroelectric power. Water now provides only about one-fifth of the total generating capacity in the country. Those who are most enthusiastic about hydroelectric development believe that oil-derived energy should be regarded only as a supplementary source at peak loads. There are others who foresee a continued expansion of both sources with hydroelectric capacity increasing in relative importance. Finally, there is a group who have great hopes for low prices of imported oil, or better still, for oil discovery in Palestine which will, they believe, permit the generation of power from oil more economically than from water. Mr. A. Ruttenberg, President of the Palestine Electric Company, believes that the short-term development is in oil, and the long-term in water.

Before the war, the fuel cost in the steam plants was 1.15 mils per KWH. At wartime prices of oil, the fuel costs were more than 2 mils per KWH. Oil prices rose sharply in late 1939 as a result of the war, but the marked decline expected with the opening of the pipeline and refinery did not materialize. Instead, prices were maintained and the Palestine Electric Company paid nearly as much as though the oil had come from the Gulf of Mexico. These high oil prices, plus large cost-of-living allowances to workers, raised costs during the war by 2.5 to 3 mills per KWH. Transportation costs of bringing oil from Haifa to Tel Aviv also increased. Large output made it possible to absorb most of these increases.

Even though war costs may fall, it is doubtful if they can match operating costs in hydroelectric production. Even at the time of the lowest oil prices yet experienced, steam power output was about one-fourth more costly than hydro power. The much lower installation costs for steam power presumably are more than offset by the lower operating costs for the hydro installations. Much of the basic cost data is still in dispute. Mr. Sitz of the Water Research Bureau suggested a figure of £P 20 investment per KW for steam plants and distribution lines. A survey made by the Palestine Engineers and Architects Association suggested a much lower figure, the exact estimate not being available; the Engineers and Architects Association survey strongly favored steam over hydro projects.

Competent experts express widely divergent judgments. Mr. Sitz thinks that thermal energy cost 6 (Palestine) mils to 7 mils per KWH during the war and that hydroelectric power could be produced for 2 mils per KWH on a large scale. Professor Breuer of the Haifa Technical Institute, however, is dubious of the economy of hydroelectric power as compared with thermal power if oil prices are greatly reduced. It is probable, in view of the disagreement among experts, that net costs for the two sources may not be far apart.

In the most recent revision of the Commission on Palestine Surveys report, it is estimated by Mr. Hays that electricity can be sold at 0.8 U. S. cent per KWH (based on prewar prices). This meant 1⅔ Palestine mils at prewar price and exchange relationships. It would presumably mean 1.0 U. S. cent or 2.5 Palestine mils per KWH at prices 25 percent higher in dollars and 50 percent higher in £P. No data are shown on costs for the different projects in the total scheme, nor for costs as compared with sale price.

In the Litani project of the Palestine Water Company, the over-all costs were estimated at .96 mils per KWH. This estimate is based on a load factor of 39 percent, and amortization over sixty years. These costs have been recomputed on the basis of a fifty year amortization, which is used in many comparable projects in the United States, with four percent interest rates on investment, and with a load factor of 50 percent. Transmission and distribution costs have been added, based on United States experience adjusted to Palestine conditions. The resulting aggregate cost to the consumer is not far from the estimated sales price proposed by Mr. Hays.

If we accept a prewar cost of about 1⅔ Palestine mils per KWH and make an upward adjustment of 50 percent for higher postwar installation and operation costs, the resulting 2½ mils per KWH is less than half the average cost of the Palestine Electric Corporation before the war. In 1940, total costs were 5.4 mils per KWH and average revenue was 7.3 mils per KWH. The load factor in existing plants in 1940 was less than 20 percent, whereas the projected costs are based on a 50 percent load factor. Even so, revising prewar costs to this higher load factor, the costs under the new projects would be substantially lower.

Likewise, the price of 2½ Palestine mils or 1.0 United States cent per KWH is about 25 percent lower than the average rate charged by TVA to municipal and cooperative distributors in the United States. For very large industrial users, the TVA and Bonneville projects sell power much cheaper than could be done in Palestine unless one category of users were subsidized by charging higher rates to other users. The overall price of 2½ Palestine mils would be too high to be borne by electro-chemical industries. To date in

Palestine irrigation and the larger industrial plants have been favored over home consumers of electricity.

The hydroelectric projects that we have examined are in too elementary a stage to justify dogmatic conclusions. None of them is possible without very large capital outlays, and none could be achieved rapidly. Yet in the perspective of a decade or more, given the requisite capital, it seems clear that they can make a substantial contribution to reducing the cost structure of Palestinian agriculture and industry as well as to reducing the cost-of-living of Palestine consumers. In the very short-run, the most promising efforts would appear to be those directed toward the reduction in the price of fuel and thermal power. When total irrigation expands somewhere beyond the 1.5 million dunum mark, dual-purpose irrigation and water power projects may well come to the fore.

POWER REQUIREMENTS

Calculating strictly on a load factor of 30 percent (with a transmission loss of 12 percent and a subsequent distribution loss of 10 percent), the present installed capacity of Palestine is capable of supplying about 186 million KWH per year. On the same basis, even the largest hydroelectric development foreseen in the Palestine Surveys Commission report would supply only about 473 million KWH. However due to the large power requirements of the irrigation-power scheme for its own internal pumping, and allowing for the possibility of a relatively stable load for irrigation and some industries, a load factor of 50 percent may be attainable. At a 50 percent load factor, existing capacity would supply 309 million KWH, and the largest devtlopment foreseen would supply 791 million KWH. Omitting the one-fifth of the present capacity that would be eliminated by the large development, the total power available would be 1,038 million KWH, at 50 percent load factor. Due to internal power requirements, power available for sale might be 875 million KWH or slightly more.

It will not be practical, however, to develop all of this power unless the associated irrigation is required. In our judgment, the associated irrigation is very much larger than will be required economically during the next decade; therefore the development of this much hydroelectric power will be economically impractical. Moreover since additional power will be required early in the decade, while the dual-purpose projects cannot be realized until later, thermal power must play a great immediate role.

So far as the demand for electricity is concerned, we are confronted by a great many imponderables. An attempt to estimate demand must take into account: (a) the increase in the number of consumers, (b) the effects on demand of probable price reductions, (c) the expansion of irrigation, (d) the growth of industry and the trend of power requirements per worker, and (e) the use of electricity in the various services and trades. Such calculations over very long periods, with a rapidly growing economy, are subject to very wide errors. Our own crude estimates suggest that the amount of power available for sale (with a 50 percent load factor) from the largest hydroelectric development might be approximately that required at the end of the next decade by the population of Palestine on our highest immigration assumption. It would, however, probably be about one-third more than would be required on our lowest immigration assumption.

SUMMARY

1. Perhaps 3,000,000 dunums of additional land could be irrigated in Palestine at average water costs substantially the same as in present irrigation. If additional irrigation were limited to 1,750,000 dunums, water costs could be definitely lower than at present; if it were limited to 1,300,000 dunums, costs could be very much lower.

2. The total construction cost (including field installations on individual farms) for the most carefully designed comprehensive irrigation project, which would irrigate 2,890,000 dunums, is of the rough order of £P 97 million. This cost is in prices 50 percent above prewar in £P or 25 percent above prewar in United States dollars. On the same basis, a project limited to 1,750,000 dunums might cost about £P 42 million, and one limited to 1,300,000 dunums might cost £P 26 million.

3. Both construction costs and the resulting water charges, for the designed projects, are high in Palestine as compared to the United States. In part these higher costs are due to natural difficulties in Palestinian irrigation, but in part also to the fact that U. S. cost-accounting practices commonly deliberately subsidize irrigation, charging off much of the cost of multiple-purpose projects to power, flood control, or navigation.

4. So far as natural factors are concerned, it seems possible to develop enough hydroelectric power in Palestine during the next decade to meet all additional power needs even on our highest immigration assumption. An additional installed capacity of 228,300 KW is attainable for a generating construction cost of roughly £P 19.6 million and a cost for transmission and distribution facilities of about £P 21.4 million. Power from such facilities could be sold wholesale for about 2½ Palestine mils (1.0 United States cent) per

KWH, or about 25 percent lower than the average rate charged by TVA to municipal and cooperative distributors in the United States.

5. On our maximum immigration assumption, as much power as this might well be needed, but it is doubtful whether it would be economically wise to attempt to derive it primarily from water. Most of the dual-purpose (irrigation and power) developments would probably not be economical unless irrigation were extended far beyond what we consider to be economically justified during the next decade. It seems that Palestine's first dependence must be on increased power from thermal sources. On our projections, very large further opportunities for additional irrigation and hydroelectric power development will remain even after very rapid economic expansion during the next decade.

6. The above conclusions are our best judgment on the basis of present information. Existing information suffices for many small immediate projects. Before a basic, comprehensive water and power plan can be formulated, however, much more is necessary: further basic water research, an authoritative review of fuel price policy, and negotiations with Transjordan and the Lebanon looking to joint water and power development.

CHAPTER 24

AGRICULTURE IN THE NEXT DECADE

EXPORT CROPS

In the late 1930's, fresh citrus fruits accounted for about three-quarters of the total value of Palestine's exports. Only two other groups of agricultural products accounted for more than one percent of the total value of exports. These were edible olive oil (1.4 percent in 1936-39) and hides and skins (2.3 percent in 1936-39). Due to the subsequent expansion of manufactures, citrus fruits will not again acquire their old dominance in total export trade. Citrus fruits must however continue, for many years to come, to be far more important in Palestine's *agricultural* exports than all other agricultural products together.

Citrus Expansion

There is much discussion in Palestine of the best methods of growing citrus fruits—of the advantages of the various citrus stocks and varieties, the wisdom of lengthening the growing season, optimum planting densities, alternative irrigation systems, and the best cultivation methods. Broadly speaking, however, the citrus growing problem has been solved—as completely as any growing problem is ever solved. A country where a first-class grove is expected to yield 400 cases of exportable fruit per acre has something to teach other citrus regions. Palestinian citriculture is clearly more expert and more successful than the citriculture of any other Mediterranean country, and it compares well with the most progressive citriculture of other regions.

Natural advantages and her drive towards intensive cultures (with a high input of capital and labor on a small area of land) combine to impel Palestine in the direction of further expansion of citriculture. She has sufficient suitable land so that, if world market conditions should warrant, she could easily double the planted area reached in 1938-39 and perhaps even triple it, without resorting to soils unsuited to citrus. Capable and dispassionate judges agree that Palestine's grapefruit and lemons are very good, while in the Shamouti (Jaffa) orange she has a contender for the prize of the best orange in the world. Given access to markets and a competent handling of shipping and marketing problems, Palestine should be able to maintain and expand the position she held in 1939 as the world's greatest citrus exporter.

Nevertheless Palestinian citriculture was confronted, at the end of the war in Europe, by great economic difficulties. The most general of these difficulties—due to the wartime dislocation of her price structure and the techniques of deflation or devaluation required to make her exports competitive in world markets—will be treated only incidentally in this chapter; strictly speaking, it belongs to the realm of general monetary policy, which is discussed separately in Chapter 28 below. Apart from this most basic difficulty, Palestinian citriculture has other serious problems. First, her groves are in a neglected condition and will require substantial outlays for rehabilitation. Second, she needs access to shipping of such a quality as will assure arrival of her fruit in good condition in European markets: the absence of such shipping has in the past deprived her growers of the cream of the reward for all their efforts. Third, and most important, her citrus fruits need equal and relatively free access to European markets.

All these questions are political quite as much as they are economic. Grove rehabilitation is political because it is involved in the issue of continued Government financing of losses due to the war. Shipping arrangements are political because so large a part of total oceanic tonnage is now in public hands and because shipping schedules and rates are effectively subject to control, by countries owning shipping, in the light of general trade policy. Equal and relatively free access to European markets is the widest political issue because it bears on discriminatory trade systems, exchange controls, and—even more generally—on whether the assurance of political stability in Europe will be sufficient to permit the development of an expanding world economy with extensive international division of labor. If these political issues are solved favorably, there will be room for an expanding citriculture in Palestine—with a planted area, investment, employment and export much larger than in 1938-39. If they are solved unfavorably, even some of the present planted area may prove to be redundant.

At the beginning of 1945, even the most superficial observer could see, by driving down any road in the citrus belt, that many Palestinian groves were in badly neglected condition. Being unable to ship their crops, growers have been unable to afford sufficient water, fertilizer, pruning or cultivation to maintain the groves in good condition. Experts estimate that, as compared to a normal annual prewar outlay of about £P 9.0 per dunum for total grove maintenance, some groves now need as much as £P 20.0 (at inflated war prices) of "deferred maintenance" expenditure to bring them back to good condition. For the whole industry, the amount of such arrears of maintenance is variously estimated at between £P 1.5 million and £P 2.5 million, with the best-informed opinion inclining towards the higher figure. Moreover many groves require rehabilitation or restoration of capital equipment because growers dismantled and sold their packing sheds, failed to bore new wells, omitted to replace pumps, pipes, fences, etc. The cost of these capital items may well exceed £P 1.5 million, bringing rehabilitation costs to a total of the very rough order of magnitude of £P 4.0 million.

In addition to these rehabilitation requirements, the citrus industry may incur some current losses for another season or two, until the groves respond to rehabilitation and again reach full-bearing condition. Even in 1945-46, Shamouti orange groves are not expected to yield, on the average, more than 30 exportable cases per dunum* as compared to the 70 exportable cases from all Shamouti groves (good and bad, Arab and Jewish) that is anticipated, apart from seasonal variations, when the groves are in normal condition. If the necessary rehabilitation expenditures are made, the present planted area should reach normal bearing condition by 1948-49. In that case, in 1948-49 the present planted area should yield a supply of exportable fruit about 15 percent higher than the amount actually exported in 1938-39. The expansion would proceed very roughly as indicated in the following table.

ESTIMATE OF PALESTINIAN CITRUS CROP DURING THE REHABILITATION

	Exportable crop (thousands of cases)					*Crop unfit for export (thousands of tons)*
Season	*Shamouti*	*Valencia*	*Grapefruit*	*Lemons, etc.*	*Total*	
1945–46	6,060	855	800	360	8,075	120
1946–47	9,090	1,045	1,200	400	11,735	137
1947–48	12,120	1,235	1,600	440	15,395	126
1948–49	14,140	1,390	1,600	480	17,610	115

Source: Dr. L. Pinner and B. Schur, *Citrus Industry*, 1945 (unpublished). Prewar case = about 33½kg. net weight = about 74 lbs. net weight. One metric ton = 30 cases.

In the prewar years, total grove maintenance costs varied in Jewish groves from about £P 7.0 to £P 15.0 per dunum. A grove of average quality, yielding 75 cases of exportable Shamouti oranges per dunum, might have maintenance expenditures of £P 9.0 per dunum, or a cost per case* on the tree of 120 mils (58 U. S. cents†). An average grove, therefore, earned some return on the invested capital when oranges were selling at a price which yielded the grower over 120 mils per case on the tree. A first-class, expertly administered grove, however, would achieve a yield of about 100 exportable cases of oranges with a maintenance outlay of £P 8.0 to £P 10.0 per dunum. Such a first-class grove would earn some return on invested capital at any price which would yield the grower more than 80 to 100 mils (38 to 48 U. S. cents) per case on the tree. With costs as low as these, Palestine's competitive position was very strong.

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* Year-to-year crop variations are, however, sizable, and it is therefore possible that the yield will be much larger, in spite of the poor condition of the trees.

However, as a result of the high prices of labor and material and the low yields of 1944-45, Palestine's deteriorated groves are not in a position to compete in the prewar manner. In 1944-45 it cost the Palestinian citrus industry (Jewish and Arab groves together) more than four times as much to grow a case of oranges as it had cost six years earlier, in the last prewar season. Moreover, picking, packing and transport costs tripled. Packing materials (almost entirely imported) more than quintupled in price. The following table indicates the change.

COST OF PRODUCTION PER CASE OF ORANGES, DELIVERED FREE PORT HAIFA

	1938-39 cost, mils	*1944-45 estimated cost, mils*	*1944-45 index, 1938-39=100*
Cost of cultivation	106.5	459.2*	432
Cost of packing materials	74.7	409.7	547
Other expenses from tree to port	101.6	314.8	309
TOTAL	282.8	1,183.7	418

Source: Study by the Chief Cost Accountant of the Palestine Government. *Based on a yield of 29 cases per dunum.

The items of cost most dependent on the domestic Palestinian price level are labor (for cultivation, picking, packing, and transport), organic manure, and irrigation water. Of these items, only irrigation water has remained comparatively stable in price. In 1938-39, workers employed in Jewish groves received an average monthly wage of £P 4.72. In 1944-45 Jewish agricultural wages (including cost-of-living allowances) were about 3½ times as high.

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* It is assumed that non-exportable grades yield a price only sufficient to pay picking and transportation costs.

† Conversion of £P into dollars is at the average N. Y. rate for 1936-39, $4.81 to one pound.

It is an especially thankless task to attempt, at the present time, to predict how low Palestine will have to bring her production costs to be able to compete when European markets are open again. Our information on costs in other countries (except the United States) is extremely scanty. Moreover, in view of the present disordered state of all European currencies and the prospect of major changes in their international exchange values, there is not even a stable accounting unit (apart from the United States dollar) for cost comparisons. Nevertheless we hazard the conjecture that Palestine will not need to reduce her cultivation costs to 120 mils per box (58 cents in 1936-39 values) but will be in a very strong competitive position if grove maintenance costs can be kept at a level where fruit in an orchard yielding 75 cases per dunum costs no more than 200 mils per case on the tree (80 cents with the £P worth $4.00). At a cost of 200 mils per case on the tree, Palestinian growers would be requiring about 22 percent less than the amount received by United States orange growers during the worst five years they have experienced; Palestine growers would be requiring only about 35 percent of the return per case on the tree actually received by United States growers for their 1943-44 crop.

RETURNS RECEIVED BY U. S. GROWERS, PER CASE OF ORANGES ON THE TREE

(*In U. S. cents*)

		Lowest five years			*1943-44*
	1919-28	*1935-39*	*1941-42*	*1942-43*	*estimated*
Cents per case	181	102	128	216	227

Source: U. S. Department of Agriculture, *Agricultural Statistics 1944*, Washington, 1945.

It must not be thought that prices in the United States will easily relapse even to the 1935-39 level. Farm wages in 1945 were roughly three times as high as in 1935-39; other elements of costs have also risen substantially. Moreover public policy in the United States is broadly favorable to stability of farm prices at approximately their present level. Therefore the United States industry is not likely to be able to compete aggressively with Palestine for European markets, at the prices on the tree suggested, unless it follows an extreme dumping policy.

The following table suggests a pattern of grove maintenance charges in Palestine which seems possible and which would even yield a small net profit to an average grove yielding 75 cases per dunum at a price of 200 mils per case on the tree:

MAINTENANCE COSTS FOR PALESTINIAN GROVES, PER DUNUM
(*In £P*)

	Labor	*Water*	*Organic manure*	*Chemical fertilizer*	*Pest control*	*Miscellaneous (not including taxes)*	*Total*
1939	3.3	1.6	1.6	0.5	0.6	1.4	9.0
"Postwar"	5.1	1.8	2.4	0.7	1.2	2.0	13.2

Source: For 1939, unpublished study of L. Pinner and B. Schur; for "postwar," the authors' judgment of possible price trends.

With a yield of 75 exportable boxes at a price of 200 mils per box on the tree, this structure of grove maintenance costs would permit a return of £P 1.8 per dunum on invested capital. For a grove with a yield of 100 boxes (and the same maintenance costs) it would mean a return of £P 6.8 per dunum. This is a modest return to growers whose total investment per dunum (apart from land cost)* will be of the order of at least £P 100—including original investment, Government war loans, net further war losses, and rehabilitation outlays.

On the other hand, should oranges sell at a price yielding 225 mils (90 U. S. cents) per box on the tree, groves with an exportable yield of 100 boxes would net £P 9.3 per dunum—a rate of return which, if regarded as stable, would begin to justify consideration of additional planting. In fact, in every season before 1936-37 (and during a period in which European general price levels were much lower than they are likely to be in the coming decade), European prices for oranges were such as to yield Palestinian growers of average efficiency, operating full-bearing groves, a return of more than 225 mils per case on the tree. It seems, therefore, that if cultivation costs can be reduced as assumed in the table above, Palestinian grove maintenance costs will be at a very strong competitive level in 1948-49, when the present planted area is fully rehabilitated.

Relatively low grove maintenance costs, however, are inconclusive as a measure of international competitive strength unless they are accompanied by competitive costs in picking, packing, and transport to final markets. In these respects, Palestine's costs were always competitive in peacetime—for oranges and grapefruit—with all of her competitors except Spain. Italy had lower handling and transport costs (to European markets) in lemons, and these factors effectively inhibited the development of a large lemon-growing industry in Palestine, in spite of the high yields and superior fruit of Palestinian lemon groves. We see no future for a large-scale lemon growing industry in Palestine unless the foreign exchange position of the U.S.S.R. should permit her to enter the world lemon market and purchase a fruit once highly prized by Russian consumers. In supplying Russian markets, Palestine would have a decided transportation advantage over all other major citrus producers.

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* Unplanted land suitable for citrus was sold at about £P 13 per dunum in prewar years; in 1944 it was selling for over £P 40 per dunum. Planted groves were sold for £P 70 to £P 100 per dunum in the prewar period (if they had reached bearing); in 1944, groves were selling at from £P 100 to £P 200 per dunum. These "capital gains" are temporary offsets to operating losses, but the gains may be wiped out by deflation.

The lower handling charges of Spain and her lower shipping costs to Western European markets, however, have not sufficed to give Spain a competitive advantage in orange* marketing. The peak of the Spanish orange industry was reached at the close of the 1920's; in the 1930's, before the outbreak of war, production declined by about one-third. Spain was displaced in world markets by Palestine and, to a lesser extent, by the United States, Brazil, and other producers. As compared to Palestine, Spain suffers from severe frosts, low yields, and—with the exception of bitter oranges for marmalades—inferior fruit. She has the advantage, however, of a shorter haul to western European markets; indeed, she is able to avoid the cost of packing, so far as neighboring areas in France are concerned, by bulk shipping in trucks and railroad cars. This advantage of position did not suffice to offset her disadvantages; the Spanish citrus industry was declining when the disorganization of the civil war came to accelerate the decline. In the years 1925-29, when the Spanish orange industry was at its peak, Palestine exported only about 10 percent as many boxes of oranges as Spain. In those years, Palestine was fourth in world orange exports—after Spain, Italy, and the United States. But by 1938-39 Palestine had become first with exports more than twice those of Spain (and nearly twice those of the United States). Spanish sales would have been even lower had it not been for preferential trade arrangements, especially with France and Germany, of a kind which Palestine was not free to negotiate.

Spain is no more ready than Palestine to resume citrus exports where they were left off at the outbreak of war. The Spanish competitive position was subject to constant pressure in the late 1930's due to the rise in her price level. That rise has continued during the war. From July 1936 to the last half of 1939 the official Spanish cost-of-living index rose by 54 percent. A new index was established with July 1939=100; this new index had risen by 1944 (average of first ten months) to 197. There has been an almost identical rise in the Spanish official index of wholesale prices. Reports from Spain indicate that these indices seriously understate the actual rise in prices. Therefore it is an error to assume that Palestinian citrus growers will enter postwar markets with an inflated cost structure while Spain—their greatest competitor—will have the advantage of operating with a relatively stable price level. Both countries will have to make major price-level readjustments to find their places in world markets. There is reason to believe that, in grasp of the problem and determination to meet it in a way which will make possible an expanding economy, Palestine will not be behind Spain.

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* Spain is not a significant producer of grapefruit.

In the market for quality oranges, Palestine's chief competitor has been the United States (particularly California-produced Navels). In the years 1935-39 the United States produced an average of 67 million boxes of oranges, compared to an average of about* 10 million boxes for Palestine. But domestic consumption took 94 percent of the total United States output while it absorbed only 9 or 10 percent of Palestinian production. Therefore Palestine was a much greater exporter than the United States, averaging about 8.6 million boxes in 1935-39 compared to about 5.3 million for the United States. Moreover the United States sold more than half of her total exports in Canada, where she had a natural transportation advantage and did not come into competition with Palestine; the United States sold only an average of 2.5 million boxes in European markets. Furthermore United States orange exports were sold nearly throughout the year while Palestine's exports of oranges were concentrated in the five months November through March. Nevertheless the United States exports constituted serious competition, particularly in her years of large crops and bad economic conditions, as in 1938 when the United States exported 4.2 million cases to European markets. The most serious challenge to the Palestinian growers was the fact that the United States oranges uniformly commanded a higher price than Palestine's.

The testimony of growers and dealers indicates that the higher price commanded by the United States product is a tribute to the superior packing, grading, shipping and marketing methods of the California growers. The Shamouti orange, at its best, is in no way inferior in appearance or taste to the best California Navel. Having characteristically a slightly thicker skin, the Shamouti may even have better natural shipping qualities. But the Palestine industry did not exploit these natural advantages to secure the cream of the quality orange market. Its fruit was not graded, disinfected, wrapped and shipped like the California fruit. Due to the employment of slow, non-refrigerated ships, the fruit often arrived in European markets in poor condition. A combination of late, heavy rains in Palestine with slow ships and hot weather, during a particular shipping season, might spell disaster to growers. It has been estimated that, apart from deterioration of quality, the outright loss of fruit in shipment was 35 times as great among Palestine growers as in the experience of the California Fruit Growers Exchange. The contrast is all the more striking because the Palestine shipping season is limited to winter and spring, while the California growers ship nearly 12 months of the year. Unless Palestine can secure dependable schedules of fast ships, probably including some refrigerated tonnage towards the end of her shipping season, she will not be able to compete in the quality market.

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* Non-exportable grades estimated at minimum level of 15 percent.

In grapefruit, Palestine was nearly as important an exporter in the last three prewar seasons as all other exporting countries together. The United States, South Africa, and Palestine were the only important exporters, the United States accounting for an average export of 1.0 million cases, South Africa under 0.4 million cases, and Palestine 1.8 million cases. Palestinian growers were lured into grapefruit production by the enormous yields of Marsh seedless in Palestine. An average grove yields 480 cases per acre (120 per dunum), including 400 cases of exportable quality. Yet the position of grapefruit in Palestine is rather different from that of the Shamouti orange. In the Shamouti, Palestine has a product with some unique qualities that has never been grown successfully elsewhere. The Marsh seedless grapefruit produced in Palestine is fine but no better than that grown elsewhere.

In the prewar years, the export of grapefruit was an unprofitable business. Moreover grapefruit (and grapefruit juice) has canning possibilities which detract from the premium for freshness and nearness to the market. Many of the British West Indies are now producing grapefruit. Therefore, in spite of the fact that Palestine is the only Mediterranean producer, her future may be less secure in grapefruit than it seems in oranges. On the other hand, it must be emphasized that grapefruit was still a relatively new fruit in Europe at the outbreak of World War II. It was regarded, even more than oranges, as a luxury product to be kept out by tariffs and exchange quotas. Even should Palestine's share of the total grapefruit market contract, it seems that there will be room—as total European consumption of grapefruit rises—for a substantial expansion in her absolute output.

From year to year, during the 1930's, Palestine increased her share of world exports of citrus fruits. In every European importing country where equal entry was afforded to all suppliers, her fruit rapidly acquired a dominant market position. In the last prewar citrus season, Palestine was the world's largest citrus exporter. It was not, however, a profitable season for her. The closing of many European markets through bilateral treaties, import quotas and exchange restrictions had rendered the supply of citrus fruit excessive. Yet, in this general surplus situation, the Palestine industry showed great competitive power. The following table shows the position reached in 1938-39.

PALESTINE'S EXPORT OF CITRUS FRUIT, 1938-39

	Oranges	*Grapefruit*	*Lemons*
Number of boxes	13,055,400	2,066,833	142,243
Percent of world exports	24%	48%*	2%

Source: U. S. Department of Commerce, *Citrus Fruits*, Washington, 1940.
* Approximate.

The progress of the Palestine citrus industry in the 1930's was not due to temporary or special causes. It was the result of intelligent exploitation of fundamental natural advantages. The industry today has serious economic problems of rehabilitation, price structure, transport and marketing. Should those problems be handled capably, the industry will be in a position to retain and expand its 1938-39 share of import markets. Moreover, if—as is not impossible—the freeing of the channels of postwar trade should mean particularly greater access to markets in the U.S.S.R., eastern Europe and central Europe, Palestine would profit especially. Her locational advantages with respect to these additional markets would give her a decided differential in competition with all other major citrus producers. This differential would be particularly great in all countries that can be reached through the Black Sea or the Danube.

The magnitude of European citrus markets can be known only by trial and effort. The demand for citrus fruits, in general, will depend on the purchasing power of European consumers and the competition from other fruits (and possibly vitamin-rich vegetables). The demand for Palestinian citrus fruits, in particular, will depend on these general factors and on the effectiveness of Palestinian promotional efforts and trade arrangements.

A very large (and quite meaningless) "potential demand" for citrus fruits can be derived by the simple arithmetic process of taking per capita consumption in the United States or United Kingdom as a reference point and multiplying that per capita consumption by the total population of the country whose demand is being examined. Calculations of this kind, however, are of little operational use because the incomes, food alternatives, and acquaintance with citrus of the consuming public in these many countries are so various.

Dealers in citrus fruit, with wide experience in marketing in Britain and on the European continent, believe that the bulk of the fruit is consumed in cities of over 100,000 population—except in Spain and Italy, where it is grown. The rural districts generally have comparatively cheap supplies of local fruit. Their incomes are lower than urban incomes. Moreover, distribution costs for imported citrus are lower in large cities than in small towns and farm areas. The price of citrus, therefore, in contrast to domestic unprocessed foods, is lower in the large cities than in rural areas. For these reasons, the rural districts cannot be brought to increase their demand for citrus fruits rapidly.

Dr. Ludwig Samuel has attempted to determine the extent to which European demand for citrus fruits in the 1930's was inhibited by a single factor—trade barriers. He uses the United Kingdom (in spite of her imperial preference citrus duties, from the benefits of which Palestine was excluded) as a standard of comparison, representing a country with relatively free trade. He then determines the potential "circle of consumers" in European continental countries by comparing their incomes, degree of urbanization, and supply of locally produced fruit with that of the United Kingdom. By these methods, he estimates that consumption of oranges in Europe (apart from the U.S.S.R.) would have been about 16 million cases larger in 1937 had European citrus trade been as free as that of the United Kingdom. Since actual imports of oranges in 1937 were about 39 million cases, the trade restriction factor comes out in these calculations as a very important one.

Dr. Samuel further estimates that, on the basis of past consumption trends, an increase of 20 percent in per capita consumption beyond the 1937 level might be anticipated in a relatively few years. On this basis—but without widening the "circle of consumers"—the European importing countries would require about 28 million more cases of oranges, or a total of 67 million cases instead of the 39 million cases they actually imported with the trade restrictions in force in 1937. Dr. Samuel would be the first to insist that these calculations afford only a rough suggestion of the probable order of magnitude of marketing possibilities under freer trade systems. Yet they open large vistas of possible expansion when compared to the approximately 16 million cases of exportable oranges which Palestine will be able to produce on her present planted area when her groves have been rehabilitated.*

The range of possible increase in citrus imports would be widened still further if allowance were made for the increase of Europe's population and the possible rise in per capita incomes above the 1937 level. An enormous new factor would be added if the U.S.S.R. were to enter the import market. The U.S.S.R. has no land that is sufficiently frost-free to grow citrus successfully.† Yet under the Soviet regime her imports of citrus fruits have been negligible because she lacked foreign exchange to purchase such "luxuries" in significant quantities. Should the foreign exchange position be transformed, the U.S.S.R. might emerge as a purchaser of tens of millions of cases of citrus fruits. In other European markets, Palestine must reasonably allow for a considerable share of any demand expansion going to the lower-price Spanish and Italian fruit, but in the case of the U.S.S.R. her transportation advantage may give Palestine almost all the market in European Russia—if price is determinative.

Quantitative allowance for expansion in citrus demand due to European population growth, possible increase in the general level of European incomes, and a new Russian import policy are easy to make on a schematic arithmetical basis, but at present such quantitative allowances are too weakly founded to be of much value. Even the most modest allowance for these factors raises the level of potential demand so far above experience as to provide only an extremely slippery basis for operations. Moreover, there is no need to "plan" now for such distant eventualities. The effort to expand Palestinian citrus exports must necessarily be a gradual process, proceeding as the present planted area is rehabilitated. Many efforts must be made simultaneously to enlarge markets and to improve delivered quality. If those efforts succeed, opportunities will be opened up to enlarge the planted area.

At this writing new citrus planting is prohibited by law in Palestine because of the wartime distress of the industry. Some monopolistic interests—more concerned with their own profits than with the general economic expansion of Palestine—are preparing to resist removal of the ban on new planting. These monopolistic interests argue that the present growers should be compensated for their war losses by being allowed to get the cream of postwar demand before "outsiders" are allowed into the industry. The ban on new planting may be justified so long as shipping is so limited that the Government has to advance loans to growers in lieu of sales of exportable fruit. But in a year or two—after the 1945-46 season or, at the very latest, the 1946-47 season—new planting must again be permitted, if the general growth of the Palestinian economy is not to be sacrificed to vested interests. On the other hand, the war losses of the citrus growers deserve consideration. A strong case can be made for cancellation of a substantial part of the growers' obligations under the Government's war advances. It may well be argued that these £P 3 million (and further rehabilitation advances) constitute a general war cost that should in equity be borne by the Palestinian economy as a whole. In any case, the least desirable form of compensation to the present growers would be one that would prohibit new planting and so inhibit the general economic development of Palestine.

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* The total "inhibited" demand for grapefruit is (percentagewise) even greater but also even more conjectural.

† However, small amounts are grown.

Even if new planting were to be permitted in 1946, the trees planted would not be in bearing until 1950 and would not make any significant contribution to export until 1951. The present growers will, therefore, in any case, enjoy a sheltered market for the next five seasons. Moreover, really large-scale citrus planting does not seem likely until there is more experience of a slack shipping situation and consequent accessible European markets. For these reasons, the decade 1945 to 1955 is likely to include, at most, eight seasons in which significant new citrus planting will be possible in Palestine. We think it not unlikely that in those eight seasons it may prove profitable to plant an average of something like 25,000 dunums of new citrus groves per season.* This would be substantially below the 40,250 dunum average attained in the four years 1932-35, but it would be starting from a higher output level and should permit continuous further growth rather than the cessation of planting experienced in 1937-39. We would expect the new groves, when mature, to be about 30 percent more productive than the average of those now planted. We would also expect them to be more "mechanized", reflecting the increased cost of labor. That would mean less dense planting, larger trees, less basin irrigation, and more tractor cultivation.

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* However, if the Russian market should open wide, this figure would be substantially too low.

In this moderate expansion of Palestine's citrus area, we presume that her shipping season would be widened, at most, to seven months (October through April). The Mediterranean fruit fly, the comparatively mediocre quality of Palestine's summer-ripening fruit, and competition from summer producers in the southern hemisphere effectively combine to inhibit the further extension of the Palestinian season. Moreover, since a greater variety of locally-produced fruit is available in Europe during the summer, the market for citrus is not sufficiently strong to support a producer that suffers from Palestine's handicaps in growing summer citrus fruit.

Should there be an average expansion of 25,000 dunums in the planted area during the last eight years of the decade 1945-54, Palestine would have a planted area of 450,000 dunums in the 1954-55 season. Her groves would have an export capacity, in full bearing, in excess of 35 million cases (including oranges, grapefruit, and lemons). This is only about one-fifth of the magnitude of the citrus crop harvested in the United States from the bloom of the year 1943, but it will be a much larger fraction of European import capacity. Total annual European (including Russian) imports of citrus fruits would probably have to be of the order of 70 million to 90 million cases for Palestine to be able to sell 35 million cases during her season at profitable prices. Should the total European demand or Palestine's share of the market be larger, there would still be plenty of land in Palestine suitable for additional citrus growing.

Refined investment cost estimates are not possible at the present time. However, assuming (as above) total postwar grove maintenance costs at a level 47 percent higher than prewar, the investment required to bring these groves to self-sustaining condition would be very large. If (in addition to somewhat higher maintenance costs for the old-type grove) we assume—at least for part of the groves—more expensive irrigation installations to permit less hand-labor in cultivation, we get an ultimate saving in costs but a higher initial investment. The investment cost might then work out to an average of about £P 100 per dunum or a total of about £P 20 million for 200,000 dunums, apart from land cost. (This £P 20 million, however, should not be taken as other than a general suggestion of the order of magnitude involved; the actual capital requirement might well be 25 percent higher or lower.) At present land prices of fully £ P40 per dunum, the land cost would add up to a total of £P 8 million.

These are large amounts, but they would be readily forthcoming from both Arabs and Jews who have made money in business during the war years, providing that citriculture again began to appear to be a profitable venture. Citriculture is the one economic activity requiring sizable capital outlays about which many Arabs feel that they have sufficient knowledge to justify investment. In the 1930's, out of a total new planted area of about 207,500 dunums, Arabs were responsible for fully 47.2 percent. Even should the main driving force in Palestine's economic development in the next decade be Jewish immigration, we doubt that more than 55 percent of the new citrus planting will be done by Jews. Even as high a figure as 55 percent will probably be reached only if new cooperative and collective settlements include more citriculture in their total scheme of agricultural operations. The many European Jewish immigrants with a small capital who went into citriculture in the 1930's will be lacking in the new immigration.

While the absolute importance of citriculture as a source of employment will gradually increase in the postwar years, its relative importance seems likely to decline sharply if Palestine has a considerable immigration. On our estimate of the expansion possibilities, the decline will be particularly great in the Jewish sector.

ESTIMATED EMPLOYMENT IN JEWISH CITRICULTURE, 1938-39 TO 1954-55

	Total Jewish planted area (in dunums)	*Total exportable crop (in cases)*	*Man-years work in groves*	*Total man-years employment provided*
1938-39	155,500	10,000,000	17,400	20,000
1948-49 (present planting)	120,000	9,266,000	14,525	16,700
1954-55 (when full-bearing)	230,000	20,000,000	30,000	35,000

Source: For 1938-39 and 1948-49, unpublished study by L. Pinner and B. Schur; for the full-bearing stage of the 1954-55 planted area, estimates by authors.

The total increase in employment in Jewish groves that seems likely during the decade (even disregarding the fact that the groves will not yet be in full bearing) is of the order of 12,600 persons. Increase in associated citrus handling will require perhaps 2,400 more. The employment of 17,400 man-years in groves in 1938-39 compares with a total of 192,000 Jewish gainfully employed in 1939. Assuming (as was nearly true in 1939) that only Jews were employed in Jewish-owned groves, the citrus groves provided the equivalent of full-time employment for 9.1 percent of the Jewish labor force. Without Jewish immigration (and with a gainfully employed ratio of 41 percent), the Jewish earning population will number 269,000 in 1954, and citrus groves—on our above assumptions—will be able to provide about 11.2 percent of them with full-time employment. However, assuming a Jewish immigration of 1,125,000 persons during the decade, the number of Jewish earners would be about 749,000, and citrus groves would be able to supply only about 4.0 percent of them with full-time employment.*

While there have been several careful investigations of the amount of employment in Jewish citrus groves, there is no comparable information on the non-Jewish sector. A popular opinion has it that, in 1938-39, employment in the two sectors was about equal. The non-Jewish groves then totaled only about 144,000 dunums compared with 155,500 dunums for the Jewish; the areas alone, however, are a very unsafe basis for calculating labor requirements. On the one hand, the Arab groves were more completely dependent on hand labor. Labor was comparatively cheap, and there was consequently little pressure to use labor-saving machinery. On the other hand, the Arab cultivation standard was much lower than the Jewish, and their exportable yield was also far lower. In 1938-39, Jewish groves accounted for about 65.4 percent of total exports. The Jewish groves therefore must have required more labor in picking and especially in packing and handling for export. The following table contains rough estimates based on these considerations, in default of precise information.

ESTIMATED EMPLOYMENT IN ARAB CITRICULTURE, 1938-39 TO 1954-55

	Total Arab planted area (in dunums)	*Total exportable crop (in cases)*	*Man-years work in groves*	*Total man-years employment provided*
1938-39	144,000	5,300,000	13,000 to 18,000	14,500 to 20,000
1948-49 (present planting)	130,000	8,344,000	12,000 to 16,000	14,000 to 18,000
1954-55 (when full-bearing)	220,000	15,000,000	25,000 to 30,000	29,000 to 35,000

Source: Various, adjusted by crude estimates made by authors.

The total non-Jewish gainful employment in 1939 may be estimated at approximately 310,000 (or roughly 32 percent of the total non-Jewish population), disregarding the nomadic population. Of this 310,000, between 4.2 percent and 5.8 percent were employed in Arab citrus groves. No Jews were employed in non-Jewish groves. Should there be no non-Jewish immigration during the next decade, the 1954-55 planted area would provide full-time employment for a maximum of 5.8 percent of the non-Jewish gainfully employed. With a net non-Jewish immigration of 125,000, the citrus groves would provide employment for a maximum of 5.4 percent. Therefore, broadly speaking, our projected rate of increase in citrus planting would barely permit the citrus industry to hold its own in the total occupational structure of the rapidly increasing non-Jewish population of Palestine. Any slack created by a substantial shift away from the traditional subsistence agriculture would have to be taken up elsewhere.

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* We are aware of the unrealism involved in assuming—as we do above—that the magnitude of Palestine's citrus industry is wholly dependent on the magnitude of export demand. Immigration will itself create pressures to enlarge the industry. However, in view of the many other uncertainties, we have disregarded this variable pressure.

Other Exports

Apart from citrus fruits, Palestine today has no agricultural production primarily oriented to meet the requirements of foreign markets. Her Arab Fellah cultivators have only begun to move away from subsistence agriculture in the direction of adjusting their output to meeting the demands of local urban markets. Her Jewish cultivators, while practicing a type of agriculture closely tied to the demands of the urban Jewish population, have hardly begun to explore the products that would yield the highest returns in foreign markets. Yet Palestine is naturally adapted to playing much the same role with respect to the urban markets of northern Europe as California and Florida perform for the colder regions of the United States. She has no comparative advantage in the production of cereals, the raising of meat animals, or the growing of deciduous fruits. But her warm climate makes possible the growing of a great variety of sub-tropical fruits and vegetables and the marketing of high quality temporate vegetables and fruits (providing that they do not require the stimulus of cold winters and a slowly-warming growing season) at a time when they are "out of season" in northern countries.

The cultures for which Palestine has a comparative natural advantage require an especially intensive use of land. They also require farmers who are prepared to adjust themselves to raising a variety of crops and adapting their output rapidly to market factors. Such adaptability is probably currently beyond the education and temper of almost all of Palestine's Arab farmers, but it is not beyond the capacity of her Jewish farmers. Effective selling of such products in distant markets would require cooperative marketing, but cooperative marketing is already dominant throughout Jewish agriculture.

One tropical fruit widely grown in Palestine, in regions where there is plenty of irrigation water, is the banana. It is a dwarf variety, with a good taste, but probably could not compete in major European markets with the larger fruit grown under the tropical rains of Central America. At most, a moderate quantity might be sold in eastern Europe, where Palestine enjoys a transportation advantage.

A more promising fruit seems to be the avocado. Many varieties are now grown, on a more or less experimental basis, including some with thick skins and correspondingly good shipping qualities. However an aggressive marketing job needs to be done with the avocado. Though its fine flavor and high food value are not unknown to European consumers, it is still an exotic product. It will probably always be too expensive to become a staple food, but a limited production for a quality market could be profitable.

Mangoes are grown, but varieties of satisfactory flavor have not yet been found; the market will probably remain very small even if the variety problem is solved. Pineapples, on the other hand, have been grown with complete success; there is at present no reason to believe that production can be cheap enough to form the basis for a canning industry, but it is possible that fresh fruit might be supplied to a limited market in the Middle East and Europe. Fine varieties of early table grapes are grown; these could be delivered to European markets for several weeks before grapes are available from mother Mediterranean sources. Cantaloupes of first-class quality have been grown in small quantities and could be exported.

Very early tomatoes, from the Jordan Valley, could be sold in European markets during the winter when the only locally-available supplies are hot-house products. The Jordan Valley tomatoes are of good quality and would have no price problems in competition against produce raised under glass. It seems quite possible that tomato growing for export markets might occupy several thousand dunums of very intensive cultivation. Similarly, firm lettuce of excellent shipping quality can be grown in Palestine and might be delivered in Europe from December to May, when there is no local produce in northern areas. Lettuce cultivation, for export, might occupy an areas as large as that under tomatoes. Other less important vegetables that Palestine might be able to export at seasons when they are unavailable in Europe include celery, asparagus, artichokes, brussel sprouts, cucumbers and perhaps even eggplant and cauliflower.

There is already a small bee-keeping industry in Palestine. In 1943 its net value of output was about £P 200,000. There is, however, room for developing a much larger production of honey for export, in connection with the rehabilitation and expansion of citriculture. A limited high-grade bee-culture is also possible outside the citrus belt.

Due to her climatic advantages and the development of air transport (with a 10 hour schedule between London and Lydda), Palestine could supply Europe with flowers and berries at times when she would have to compete only with hot-house production. Strawberries could be shipped in November and December. Roses, sweetpeas, and orange blossoms could be sold at times when they would fetch high prices. These most perishable products are dependent on cheap air-transport, but it seems not unlikely that a small quantity of premium produce will be able to sell at competitive prices even after paying air transport charges for a maximum 10 hour journey.

A beginning has been made in producing vegetable seeds, flower seeds, and bulbs. Growers feel confident that, in this field they can play the same role with respect to northern Europe as California does in the United States.

We do not wish to convey the impression that all the products mentioned above are "sure things", that the horticultural research on them is complete, and that the marketing possibilities are firmly established. On the contrary, all of these things are in the venturesome stage. Only a few people in Palestine have been working on them on the horticultural side, and no practical export possibilities have existed during the war. Their production can expand only slowly. No one of them is, by itself, a development that can at present be conceived in terms of requiring 50,000 dunums of land for export purposes. But it is not impossible that—taking failures and successes together—this whole group of sub-tropical and out-of-season products may, a decade hence, utilize 75,000 to 100,000 dunums of irrigated land to supply export markets. In a more distant future, when varieties have been perfected and markets expanded, a substantially greater industry may be possible.

Even 75,000 to 100,000 dunums of irrigated land, in these intensive cultures, would mean an agricultural employment of perhaps 12,000 to 18,000 people—apart from employment in handling and marketing. So far as the vegetables are concerned, Palestine's climate would permit three or four crops a year. A physical area of 4 to 6 dunums (1.0 to 1.5 acres) would probably be as much as a man could handle. The tree and bush crops would also involve a more intensive use of land than any other agricultural activity practiced in Palestine except citriculture.

The capital requirements for this intensive market farming would not be high, on a per-man-employed basis (though they would be high on a per unit of physical land area basis). A great part of it would require no expensive plantations or livestock. In prewar Palestine, about £P 210 of capital were required to equip a man for intensive vegetable raising with sprinkler irrigation, compared to about £P 515 for grape growing, about £P 610 for deciduous fruit, and about £P 700 for poultry raising. Even if we count upon average capital equipment costs 50 percent higher (in £P) in the postwar period than they were before the war, it seems unlikely that the average capital requirements per worker in the export crops enumerated above will exceed £P 600. On the same price level basis, most modern type Palestinian agricultural production for domestic markets would require far more capital.

It is not to be anticipated that more than two or three thousand Arab farmers would find employment in these export crops—and they probably only at the end of the decade, after some years of Jewish successes in growing and marketing. Jewish employment might be 10,000 to 15,000. But, it must be emphasized again, a firm basis for this employment has not yet been found. We have merely indicated the general avenue along which it may be found.

Were this new avenue to develop by the end of the present decade, with approximately the breadth suggested above, Arab employment in all primarily export crops would total (including the citrus employment projects above) the equivalent of from 27,000 to 33,000 man-years. Jewish employment, in the same agricultural branches, would total about 40,000 to 45,000 man-years. These totals would account for between 4.8 percent and 6.4 percent of the non-Jewish gainfully employed and from 5.3 percent to 16.7 percent of the Jewish gainfully employed. The ranges are determined by the higher and lower limits of economic expansion projected and the higher and lower limits of the magnitude of the gainfully employed population resulting from our alternative assumptions with respect to immigration.

DOMESTIC FOOD REQUIREMENTS

The amount of labor and capital that it will be profitable to employ in Palestine during the next decade in supplying Palestine's own food requirements will depend upon three factors: first, the magnitude of total Palestinian food consumption, which is in turn dependent on the size of the population and the level of income; second, the range of foods that Palestinian farmers will be able to market profitably in competition with foreign produce;

and third, the farm labor and capital requirements per unit of food output. These factors are particularly determinative for the expansion of Jewish output.

Jewish "mixed" farms are engaged essentially in production for Jewish urban markets. They derive about three-quarters of their net incomes from sales to the market and only about one-quarter from the consumption of their own farm produce. The real incomes of Jewish farmers are therefore determined primarily by the relationships among the monetary values of the marketing receipts for produce, farm costs, and the prices of consumption goods that they buy. Arab Fellah farms, on the other hand, derive only about one-third of their net incomes from sales to the market, while about two-thirds consists of the consumption of their own farm produce. Market prices are important to the Fellah because they determine the quantity of town-produced (and imported) goods he can buy and govern his ability to repay debts, but market relationships do not have the same central significance for him as for the Jewish farmer. When the Fellah is able to increase his production of olives, vegetables, fruit or eggs, he values the increased output only partly because he will be able to sell more: in the first instance, he will be able to eat more.

We anticipate a very rapid rise in the total number of Palestine's population during the coming decade, but we do not anticipate a corresponding rise in average per capita real income. There is likely to be a sustained rise in real income for the Arab sector, particularly if there is large-scale Jewish immigration. Arab incomes will go up slowly as Arab farming is modernized and as Arab urban occupations expand. There is likely, we believe, to be an even greater rise in the average incomes of Jews now in Palestine: the present Jewish population will profit, in many ways, from being "on the ground floor" with respect to the opportunities created by the new inflow of immigrants. However, taking present Jewish residents and new immigrants together, we question the likelihood of any sizable increase in average Jewish real incomes. For most of the immigrants, the Palestinian average will be far above their recent standard. Their lack of skill will tend to pull the average down—unless there is a really lavish inflow of imported capital and managerial talent to compensate for the unskilled character of the labor force. For these reasons, in the present consideration of domestic food requirements we assume approximate stability of Jewish real incomes at about the 1936-39 level. We do not however regard it as wildly improbable that, even on our maximum immigation assumption, real per capita incomes might be 10 percent higher in 1954, with almost correspondingly greater total food consumption.

Replacement of Food Imports

It is clear that Palestine will not be able to supply all of her domestic food requirements. In the years 1936-39, imports accounted for about 41 percent of her total food supplies by value. Under war pressure, and at the expense of a considerable deterioration in the quantity and quality of the diet, imports in 1943-44 were reduced to approximately 30 percent of total supplies, value at pre-war prices. When the tightness in world shipping and food supplies passes, imports will no doubt again increase in relative importance, unless Government import controls are retained and consumption "directed" towards Palestinian production. In the years 1936-39 Palestine imported about 46 percent of her total meat and poultry supplies, 42 percent of her eggs, 77 percent of her fish, 84 percent of her butter, 77 percent of her oils and fats, 65 percent of her potatoes, 51 percent of her bread grains, and 100 percent of her rice and sugar. Only in milk and milk products (apart from butter), in fruit, olives, vegetables and legumes was domestic supply clearly of dominant importance; in egg supplies, domestic sources led by a modest margin.

The importance of imported foods in the Palestinian diet has led to many suggestions that Palestinian consumption ought to be "directed", by propaganda and import control, away from meat (which Palestine has hitherto been incapable of producing on competitive terms, due to her deficiency of natural pastures) and towards fresh eggs, fresh milk, and soft cheeses (all of which are less subject to competition from distant producers). The difficulties and disadvantages of this program of redirecting consumption are: (1) Jewish urban consumers have a well-established preference for meat; (2) domestic eggs, milk and cheeses normally cost somewhat more than imported meat with an equal nutritional content; (3) the Palestinian diet, even in peacetime, has been so deficient in animal protein that there is danger in any control policy that may result in a further decline in animal protein consumption; and (4) Palestine is not a particularly efficient producer of these substitutes for meat (as she is of citrus fruits, and can be of some other fruits and vegetables), and consequently emphasis on their production does not mean high returns except through premiums paid by urban consumers.

On the following page, we present a table based upon the research of Dr. Ludwig Samuel, which outlines a food import and production policy designed to assure adequate nutrition while redirecting consumption towards domestic supply to the maximum extent which now seems compatible with the purchasing power of the Palestinian consumer. With this shift in consumption patterns, Dr. Samuel achieves an over-all Palestinian food self-

TABLE 13: PALESTINIAN SELF-SUFFICIENCY IN FOOD, PREWAR AND POSTWAR

(In metric tons)

	Average consumption 1936-37 through 1938-39			*Postwar requirements **		
Commodity	*Home produce*	*Net import or export (−)*	*Total*	*Home produce*	*Net import or export (−)*	*Total*
Beef	4,000	6,600	10,600	4,970	2,000	6,970
Mutton	6,080	2,500	8,580	6,660	2,500	9,160
Poultry	3,620	1,200	4,820	4,900		4,900
Other meat		1,400	1,400		2,000	2,000
Total meat	13,700	11,700	25,400	16,530	6,500	23,030
Cow milk and lebben, etc.	41,000		41,000	70,000		70,000
Goat milk	12,000		12,000	12,600		12,600
Condensed milk		1,200	1,200		1,900	1,900
Milk powder (skim)		500	500		600	600
Total milk	53,000	1,700	54,700	82,600	2,500	85,100
Eggs	4,400	3,160	7,560	6,250	2,800	9,050
Fish (fresh or frozen)	1,660	2,300	3,960	4,250	1,500	5,750
Fish (preserved)		3,300	3,300		3,850	3,850
Lean cheese	650		650	1,450		1,450
Fat cheese	2,470	960	3,430	2,920	1,200	4,120
Butter	400	2,100	2,500	650	1,900	2,550
Sanneh	160	550	710	170	500	670
Olive oil	7,000	−1,400	5,600	8,500	−1,000	7,500
Other oils and margarine (fat content)	100	13,600	13,700	3,400	14,600	18,000
Wheat flour	74,300	84,000	158,300	99,000	97,000	196,000
Other cereals (in flour)	16,000	10,300	26,300	25,200	11,500	36,700
Rice		15,700	15,700		15,500	15,500
Fresh fruit	70,000	11,650	81,650	78,000	10,000	88,000
Dried fruit		3,200	3,200		4,000	4,000
Nuts	3,500	1,600	5,100	3,500	2,000	5,500
Olives	4,000	230	4,230	5,000	500	5,500
Potatoes	9,500	17,700	27,200	40,000	6,600	46,600
Fresh vegetables	87,000	6,100	93,100	117,000	3,300	120,300
Onions and garlic	8,000	6,350	14,350	8,500	6,500	15,000
Legumes	6,000	2,830	8,830	9,000	5,000	14,000
Sugar		26,000	26,000		35,000	35,000
Citrus	42,600		42,600	65,000		65,000
TOTAL	407,440	220,630	628,070	576,920	231,250	808,170
Population			1,420,000			1,855,000
Per capita annual in tons			0.442			0.436
Percent by sources	64.9%	35.1%	100.0%	71.4%	28.6%	100.0%

Source: Dr. Ludwig Samuel, unpublished study, June 29, 1944. * What we have called "postwar" will be realized, so far as population numbers are concerned, in 1946—even without any immigration.

sufficiency ratio of 71.4 percent (by volume) compared with 64.9 percent in the years 1936-39. We think that even the cautious redirection of consumption outlined by Dr. Samuel is not free of the dangers mentioned above. We reproduce this outline, however, because it is based on a very closely-reasoned market analysis which seems to us to set a maximum limit on Palestinian self-sufficiency, so far as current agricultural technique goes. We would emphasize further that prospective developments in agriculture and food handling seem more likely to break down the barriers of self-sufficiency than to build them up. The premium for closeness to the market is gradually losing its hold in food supply competition. Just as meat and butter can now be brought economically from the ends of the earth, so the same fate is gradually overtaking all other branches of food supply.

Jewish Mixed Farming

Jewish farming is organized to supply some of the foods eaten by Jewish urban dwellers (and, to a very limited extent, also by Arab urban dwellers). It is therefore of crucial significance, in assessing the expansion possibilities of Jewish farming, to determine how large a share of the urban market Jewish farming may be able to supply in the future.

As the following table indicates, Jewish farms increased their share of the total food consumed by the Jewish urban population from about 34 percent in 1937-39 to about 47 percent in 1943-44. This comparison is in strictly quantitative terms and excludes such items as coffee, tea, sweets, etc. (which are treated below, in value terms).

SOURCES OF MAIN FOODS FOR JEWISH URBAN POPULATION

(*Per capita*)

	Average 1937-39		*Year 1943-44*	
	Quantity (in kilograms)	*Percent of total quantity*	*Quantity (in kilograms)*	*Percent of total quantity*
Jewish produce	189.5	34	221	47
Arab produce	32.0	6	30	6
Import produce	310.5	60	220	47
TOTAL	532.0	100	471	100
TOTAL IN CALORIES	2,533		2,309	

Source: Adapted from unpublished studies of Dr. Ludwig Samuel, April 20, 1944 and February 1945.

As the above table shows, the increase in Jewish supply from 34 percent to 47 percent was accompanied by a decline of about 9 percent in the total calories consumed. By some other indices, particularly the decline in available animal proteins, the diet deteriorated even more seriously.

The share, in money terms, of the urban Jewish food budget spent on supplies from Palestinian Jewish farms rose even more, during the war years, than the share in crude quantitative terms. Measured by value of expenditures, the share of Jewish supplies (for the same commodities as those covered in the quantitative figures above) rose from about 26 percent in 1937-39 to 54 percent in 1943-44.

FOOD EXPENDITURES OF JEWISH URBAN CONSUMERS, BY SOURCES

	Percent spent on Jewish produce	*Percent spent on Arab produce*	*Percent spent on imported produce*	*Total spent on covered commodities, £P per capita*	*Total spent on other food and fuel, £P per capita*
1937-39	25.9	6.7	67.4	15.0	3.0
1943-44	54.0	8.3	37.7	45.5	9.5

Source: Unpublished studies of Dr. Ludwig Samuel, Summer 1944 and February 1945. The percent spent is at farm and import prices, but the total consumers' outlay is at cost to the consumer. The "other" items in the last column include coffee, tea, other beverages, sweets, fuel and ice.

This rise in the share spent on Jewish produce is, in part, deceptive. In the fiscal year April 1, 1943, to March 31, 1944, the Government of Palestine spent about £P 3.5 million on the subsidization of foodstuffs—almost all on imported cereals, livestock and sugar. These prices therefore did not rise as much as others, and accordingly the share of foreign produce in consumers' expenditure was disproportionately depressed. Had all commodities been available at prewar prices, the 47 percent supplied by Jewish producers in 1943-44, in terms of quantities, would have meant rather less than 47 percent in terms of values.

Some Palestinian students of agricultural production and marketing have concluded that the share of Jewish urban food expenditure supplied by Jewish farms in 1943-44 (deflated to take account of the differential impact of subsidies) constitutes an upper limit of the share of the market that Jewish farming may be able to hold under peacetime conditions. These students point to the "natural protection" from overseas imports afforded by shipping difficulties, the large share of Arab produce in neighboring countries claimed in 1943-44 by military forces temporarily in the Middle East, the extremely favorable wartime price development, and other similar factors. On the other hand, this skeptical analysis fails perhaps to give sufficient weight to the barriers in shortage of equipment and labor that Jewish farms encountered in the war years. Had farm machinery, supplies, irrigation equipment, and labor not been so scarce, Jewish farms could have expanded their output still more and so supplied a greater share of a more adequate urban diet. The balance of these conflicting factors is difficult to assess.

Several Palestinian agricultural economists (notably Ludwig Samuel, L. Loewe, and L. Oppenheimer) have outlined a development in Palestinian agriculture and food consumption in accordance with which Jewish mixed farming might secure about 54 percent of the expenditure* on food of all Jews not engaged in mixed farming. They count on a labor market with sufficient employment so that urban workers will be able to buy a diet about 4 percent more costly (at retail prices) than that purchased in 1937-39; they assume that there will not be such boom conditions as would create difficulty for agriculture in attracting labor. Fur-

PREWAR AND PROJECTED DIETS OF JEWISH URBAN CONSUMERS

Commodity	*Unit*	*Per capita annual consumption 1937-39*	*Per capita annual consumption under diet designed to permit greater self-sufficiency*
Cereals	kilogram	150	140
Rice	kilogram	9.5	10
Potatoes	kilogram	60	75
Meat	kilogram	22	15
Poultry	kilogram	5	5
Eggs	number	265	300
Butter	kilogram	5	6
Milk *	litre	105	200
Vegetable fats	kilogram	13	11
Fresh vegetables	kilogram	52.5	70
Legumes	kilogram	4	4
Bananas	kilogram	11	12
Grapes	kilogram	16	20
Citrus fruit	kilogram	50	50
Deciduous fruit	kilogram	25	30
Fish	kilogram	12	12
Sugar	kilogram	20	20
Per-day nutritional equivalent:			
Carbohydrates		382	381
Fats		69	69
Proteins		80	83
(of which animal protein)		(29.6)	(36.6)
TOTAL CALORIES		2,533	2,546

Source: Unpublished study by Dr. Ludwig Samuel, Summer 1944. * Includes milk products and skim milk at milk equivalent.

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* Expenditure valued at farm prices for Palestinian produce and c.i.f. prices for imports.

ther, they count on the narrowing of distributive margins so that a food supply yielding 9 percent more to farmers and importers will cost only 4 percent more to consumers. Finally—and most important—they count on a shift in the diet, with a modest substitution of potatoes for cereals, a moderate increase in the importance of fresh vegetables and fruits, and a revolutionary substitution of milk (and, to a lesser extent, eggs) for meat. The table below presents the projected diet side by side with the one actually consumed by the Jewish urban population in 1937-39. It is clear that the projected diet is better, from a nutritional point of view, than the 1937-39 diet. It may also be better adapted to a warm country. But, with current consumers' preferences for meat, it is not the diet consumers would prefer to buy.

On the basis of these assumptions about purchasing power, diet and the availability of labor, Dr. Samuel has made a careful analysis of the competitive power of Jewish farmers in each of the main farm products. The results of that analysis are presented, so far as the principal commodities are concerned, on the following page. Dr. Samuel concludes that the representative Jewish urban consumer might buy as much as £P 4.906 per year of produce (valued at prewar farm prices) of these principal commodities from Jewish farms. Including other, minor commodities, he arrives at a total of roughly £P 5.0. As Tables 14 and 15 on the following page show, this means that Jewish farms will sell to each Jewish urban consumer produce of a farm value about 2¼ times as great (assuming the same level of prices) as they sold in 1937-39. Dr. Samuel develops his analysis with great learning, force and cogency. Yet, it seems clear on the basis of the general considerations argued above and more detailed points which will be raised below, that he has defined something like the upper limit of the expansion of Jewish farming based on the supply of domestic Palestinian markets.

Assuming, for the present, that each Jewish non-farm consumer purchases about £P 5.0 (at prewar prices) of Jewish farm produce, we have something of a rough "key" to employment and capital requirements. This key, of course, holds only for farming oriented to supply domestic Jewish markets. The table on Basic Relationships in Jewish Mixed Farming utilities this key, perhaps somewhat boldly, to derive a relationship between Jewish population and long-term employment possibilities in Jewish agriculture for domestic supply.

TABLE 14: SOURCES OF FOOD SUPPLIES FOR THE JEWISH URBAN POPULATION

(At 1937-39 £P prices; one £P contains 1,000 mils)

	Average of the years 1937-39							
	Jewish produce		*Arab produce*		*Imported produce*		*Total*	
Commodity	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*
Cereals	12	108			138	1,242	150	1,350
Rice					9.5	119	9.5	119
Sugar					20	340	20	340
Potatoes	10	70	5	30	45	315	60	415
Vegetables	25	200	10.5	63	17	127	52.5	390
Legumes					4	60	4	60
Bananas	7	105	4	54			11	159
Grapes	7	91	5	48	4	38	16	177
Deciduous fruit	2	30			23	437	25	467
Citrus	40	120	10	30			50	150
Vegetable fats					11.5	345	11.5	345
Olive oil			1.5	68			1.5	68
Butter*	(1)				4	492	(5)	492
Milk† (Litres)	80	920			25	250	105	1,170
Eggs (number)	85	306	15	33	165	363	265	702
Meat	1.75	88	2.25	112	18	900	22	1,100
Poultry	1.7	120	1	65	2.3	160	5	345
Fish	.25	20	1	60	10.75	485	12	565
TOTAL		2,178		563		5,673		8,414
PERCENT		25.9		6.7		67.4		100.0

TABLE 15: SOURCES OF FOOD SUPPLIES FOR THE JEWISH URBAN POPULATION AFTER A LONG DEVELOPMENT PERIOD

	Jewish produce		*Arab produce*		*Imported produce*		*Total*	
Commodity	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*	*(kg.)*	*(mils)*
Cereals	20	180			120	1,080	140	1,260
Rice					10	125	10	125
Sugar					20	340	20	340
Potatoes	60	450			15	105	75	555
Vegetables	45	338	10	60	15	112	70	510
Legumes	1	15			3	45	4	60
Bananas	9	108	3	33			12	141
Grapes	10	100	8	56	2	18	20	174
Deciduous fruit	15	225			15	285	30	510
Citrus	40	120	10	30			50	150
Vegetable fats	4	120			5	150	9	270
Olive oil	1	45	1	45			2	90
Butter*	(2.5)				3.5	430	6	430
Milk† (Litres)	180	1,800			20	200	200	2,000
Eggs (number)	165	545	30	66	105	231	300	842
Meat	6	300	2	100	7	350	15	750
Poultry	4	280	1	65			5	345
Fish	4	280	2	110	6	230	12	620
TOTAL		4,906		565		3,701		9,172
PERCENT		53.5		6.2		40.3		100.0

Source: Dr. Ludwig Samuel, unpublished study, Summer 1944. *Local butter included in "milk." †Milk includes milk products at full milk equivalent. Kg. equals kilograms of 2.205 lbs.

BASIC RELATIONSHIPS IN FULLY-EQUIPPED JEWISH "MIXED" FARMING

(£P at average 1937-39 values)

(1)	Capital required per family unit* apart from housing	£P 600-800
(2)	Labor on the farm available per family unit, expressed in man-years of 300 working days	1.0-1.33
(3)	Gross value of output per farm unit, per year	£P 185-250
(4)	Value of produce consumed on the farm, per year	£P 25-30
(5)	Value of marketable output per farm, per year	£P 160-220
(6)	Purchases (at farm prices) of Jewish farm produce per Jewish non-mixed-farm consumer	£P 5.0
(7)	Number of non-mixed-farm Jewish consumers per Jewish "mixed" farm	32-45
(8)	Number of other gainfully employed per "mixed" farm, assuming 41 percent of all other consumers to be gainfully employed	13.12-18.45
(9)	*Percent of total employment provided by agriculture oriented to domestic supply*	7.1-6.6
A.	Gross value of output per farm unit	£P 185-250
B.	Expenses of production, apart from human labor	£P 100-130
C.	Net farm income per farm unit	£P 85-120
D.	Net income per person gainfully occupied in agriculture	£P 85-90
E.	Net farm income per working day	£P 0.283-0.300

Source: Based on the authors' own estimates from the various sources indicated in the Notes and Acknowledgments. *The concept of a farm "unit" is used loosely throughout Jewish Palestinian literature to describe a family farm with labor requirements substantially larger than Jewish families are in fact able to supply. In our calculations, a farm "unit" is—by definition—a farm with a labor requirement of from 300 to 400 man-days or 1.0 to 1.33 man-years.

The average or modal values expressed in this table of Basic Relationships are subject to a wide margin of variation depending on the pattern of output. Moreover, they are subject to considerable uncertainty even as averages or modes. So far as the relationship between non-mixed farm population and the number of mixed farm units is concerned, we are not in entire agreement with previous students. In his study *Planned Mixed Farming* (July, 1937) I. E. Volcani, Director of the Jewish Agency's Agricultural Research Station, argued that 10,000 Jewish "urban" consumers should be able to support 230 to 350 mixed farm "units": this would mean 28 to 43 urban consumers per mixed farm, rather than the 32 to 45 non-mixed-farm consumers which we have calculated. Mr. Volcani, however, counted on Jewish farms being able to supply Jewish urban consumers with their "full milk, egg, meat, fruit, and vegetable produce requirements." Together with Dr. Samuel and other recent marketing students, we hold on the contrary that Jewish consumers must continue to get a substantial share of these commodities from Arab and imported produce. The divergence between our assumptions and those of Mr. Volcani are particularly sharp for deciduous fruit, butter, eggs, and meat. Moreover, Mr. Volcani assumes a higher ratio of "self-supply" on the farm than seems possible to us (if he is valuing self-supply at farm prices).

The net income per person gainfully occupied in agriculture that is given in our table of basic relationships could easily vary 25 percent from one year to the next, so far as any individual farmer is concerned, due merely to variations in yields and temporary market factors. An income per worker as low as £P 65 or as high as £P 115 is by no means excluded, even within the limits of the assumed capital equipment and assumed general level of prices. Moreover, the value of the income received by the farm population is somewhat understated, in comparison with urban incomes, because the home produce of farmers is valued at farm prices, not retail prices.*

American readers are to be warned particularly against converting these 1937-39 values into current United States dollars, by using the current exchange rate. The pattern of consumption in the rural areas of this country is so different from that of rural Jewish communities in Palestine as to make any comparison dangerous. Moreover, if—as is argued in Chapter 28 below—a Palestinian price level about 1½ times as high as in 1937-39 would encounter no special competitive problems from the current United States price level, at $4 to the £P, the 1937-39 values should be inflated by that much even for the roughest comparison.†

Our table of basic relationships does not constitute a forecast of employment and real income in Jewish mixed farming during the coming decade. It seems quite probable that during years of large immigration employment in mixed farming will be higher and income per worker lower than indicated in our relationships: workers will be unskilled and farms underequipped. Moreover, it is not impossible that, toward the end of the decade, capital and productivity per farm will be higher and the volume of employment lower: capital employed may be higher and new techniques may come into play. In addition, employment in mixed farming may be raised if substantial tariffs are imposed on foreign cereals, meat, butter, eggs, deciduous fruit, etc., thereby causing the consumer to subsidize the domestic farmer. The subsidies ("protection") would have to be heavy to be effective because Palestine is naturally a much less favorably endowed producer of these commodities than the United States, Canada, Argentina, New Zealand, and many other countries. We are not, however, free to assume that subsidization will not be extended to Palestinian production of these commodities, for a variety of political and social reasons. Under these circumstances, forecasting would be hazardous. We can stipulate only that our basic relationships data are intended to indicate the long-term employment and income possibilities, under the assumptions stated.

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* This factor is particularly important since the total Jewish population spent over 36 percent of its income on food, and the lower-income groups naturally spent an even higher percentage.

† On this crude basis, the Palestinian farm incomes, per person gainfully occupied in agriculture, as given by our table of basic relationships, would be between $510 and $540. The incomes per family unit would be between $510 and $720.

Arab Mixed Farming

It is impossible to make a quantitative projection of the trend of employment in Arab Fellah agriculture during the coming decade even when surrounded by the broad qualifications and reservations which we have found necessary in the case of Jewish "mixed" farming. Too little is known of the economics of Fellah farming to justify more than the broadest generalizations. As indicated above (page 194), even the present employment in Arab farming is known only subject to a wide area of uncertainty.

In the 1930's the drift away from agriculture was inhibited by the expansion of citriculture. If our views of the outlook for citrus and other export crops are approximately correct, these agricultural branches will not account for a larger share of Arab employment in the next decade than they did in the 1930's. With the greater non-agricultural opportunities created by large-scale Jewish immigration, the Arab trend away from farm occupations will probably be accentuated. That is also the course which is suggested by a policy directed towards raising Arab incomes—both on the farm and elsewhere.

However, the Arab labor force is clearly elastic to such a degree that increased employment in industry, construction, etc. does not necessarily mean decreased employment in agriculture. The Fellah farm community contains a large reservoir of underemployment. Mr. G. E. Wood's investigations suggest that from 1939 to 1942 that reservoir was drawn upon so heavily as to raise the ratio of total gainful employment in the non-Jewish population from about 32 percent to about 38 percent. During these years, according to his studies, non-Jewish non-farm employment more than doubled, while non-Jewish agricultural employment remained approximately constant at roughly 248,000 persons (full-time equivalent).

Even without the extraordinary stimuli of wartime, the Fellaheen will be able both to supply more labor to urban occupations and to increase their agricultural output. Today a full working year for the Fellah is 250 days; his farm organization does not permit more. Today also the tempo of his labor is low, much lower than can reasonably be attributed to climate alone. The Fellah can learn, over long periods, to work more regularly and strenuously;

if so, he can increase his output. Moreover, as emphasized repeatedly above, there is no need to adjust his output nicely to market requirements. Only as his farming becomes substantially more intensive will he develop significant surpluses for the market. Successful intensification probably involves a reduction in illiteracy, certainly means adjustment to new agricultural techniques and the development of the more regular and strenuous work habits required for intensive cultures, as well as the growth of an urban Arab consuming public. This transformation of Fellah farming is a process that must be conceived in terms of decades, rather than years. It has only begun. We see no way for it to make rapid progress during the next decade except the difficult road of Jewish and Arab collaboration in joint programs of irrigation and agricultural intensification.

PROBLEMS OF EFFICIENCY AND COMPETITION

Wheat

Wheat is an example of a commodity very important in Palestinian agriculture in which her comparative advantage is at the opposite pole from citrus fruits. Of 41 countries for which the United States Department of Agriculture has collected data, Palestine had the lowest average yield per acre during the period 1930-39.

PALESTINE AND WORLD WHEAT YIELDS (1930-39)

	Acreage (in thousands of acres)		*Yields per acre (in U.S. bushels)*	
	1930-34	*1935-39*	*1930-34*	*1935-39*
Palestine	475	533	5.3	6.1
United States	54,193	57,293	13.5	13.2
Canada	25,682	25,595	13.6	12.2
Netherlands	267	338	44.2	45.1
Denmark	259	315	43.0	45.6
Egypt	1,560	1,464	27.6	31.3
Syria (incl. Lebanon)	1,245	1,363	11.8	14.3

Source: U. S. Department of Agriculture, *Agricultural Statistics*, 1944.

Yields per acre are obviously not a sufficient measure of efficiency. High yields can be attained with disproportionate costs. To make an accurate economic comparison of the efficiency of various countries, it would be necessary to adjust yields for input of labor, fertilizers, machinery, etc. It is clear that the inclusion of such cost data would narrow the extremes suggested by the above table, but there is no reason to believe that it would alter Palestine's relative position. The differences in the yields achieved between Palestine and Syria are certainly not due primarily to these other cost factors. They are due to Syria's comparative advantage of climate and soil, for wheat production.

Within the Palestine total, there are wide differences in yields from district to district and between the more carefully cultivated Jewish farms and the less carefully cultivated Arab ones. Mr. E. I. Volcani, head of the Rehovot Agricultural Research Institute, suggests that 60 kilograms of wheat per dunum (8.9 bushels per acre) ought to be regarded as the "standard" for a Palestinian farm with present (1942) cultivation methods.* He indicates an average yield of 90 kilograms per dunum (13.4 bushels per acre) as attainable but probably unprofitable because requiring an expenditure of one kilogram of fertilizer for each additional kilogram of wheat yield above 60 per dunum. Mr. Volcani recommends a policy of attempting to achieve an average wheat yield of 80 kilograms per dunum (11.9 bushels per acre) by growing wheat only in alternate years, rotating it with carefully cultivated summer crop (durra, sesame, chick-peas, etc.), which improves the soil and increases its water-holding capacity. This target of 11.9 bushels per acre would, however, be regarded as a very low yield by wheat producers in other countries—particularly when it is attained by foregoing wheat in alternate years in favor of another crop requiring more labor but having less value on the market.

The fact that Palestine gets the lowest recorded wheat yields in the world would not be important if wheat occupied a very small place in her economy and if she were so liberally endowed with land that she could afford to use it for very extensive cultures. In fact, wheat growing is quite important in Palestine, particularly in the Arab Fellah farm, and land in Palestine is so scarce and expensive that—from the point of view of general economic policy—she cannot afford to use it for extensive, low-yield crops. Yet in the years 1936-39, Palestine used about 30 percent of her cultivated area for wheat growing.†

Jewish farming—after an early false start in wheat monoculture—has turned away from wheat. Jewish "mixed" farms are dairy, poultry, vegetable, and fruit farms, rather than wheat farms. Jewish farmers generally attempt—especially where irrigation water is available—to use their best plain land for growing irrigated green fodder and vegetables. They grow wheat only where they cannot irrigate or as one crop in the extended rotation, and commonly achieve a yield of over 90 kilograms per dunum. Arab Fellah farmers, however, generally use their best land for wheat, regard a great deal of the work they put in on summer crops as being justified only by their subsequent wheat yields, and commonly get yields of under 60 kilograms per dunum. It is against this background of soil selection and effort that Palestine's low wheat yields must be evaluated.

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* Mr. Volcani's standard was perhaps not uninfluenced by the fact that his last data were for the exceptionally good year 1940, in which the average yield was given officially as 9.2 bushels.

† Unfortunately all government agricultural production and land-use statistics in Palestine are compiled in such a way that they must "be regarded as rough estimates," to quote the language of the 1943 *Statistical Abstract*.

It does not seem to be true that Palestine's yields are low because of poor cultivation methods. We are not sufficiently expert in agricultural matters to have an independent view of these questions. The best informed opinion, however, appears to agree that the Arab plow, the Arab farm animals, and the Arab rotation are well adapted to his soil and climate. Moreover, it is not yet clear that improved wheat varieties, particularly the Moroccan and Australian ones for which some Palestinians show enthusiasm, will bring a substantial and sustained higher yield. Morocco and Australia are themselves countries of very low wheat yields, with in the former case a relatively stagnant wheat acreage and in the latter case an acreage which has been nearly cut in half during the last decade. While not denying the possibility of more successful wheat growing in Palestine, we suspect that her difficulty is basically climatic and topographical and cannot be overcome. While her wheat culture may become much better than it is today, it will never be able to compete against producers with a soil and climate really suited for wheat. Some of Palestine's hills are cool enough and have enough water, but their soil is often too thin, too stony, and not flat enough for really good wheat land. Her plains are too warm, too irregular in rainfall, and too light in rainfall (given such warmth) to compete with temperate lands. We are impressed by the fact that of the 41 wheat-growing countries on which the United States Department of Agriculture has data, only 6 show yields persistently below 9 bushels to the acre, and these 6 all have a climate very similar to that of Palestine. The 6 and their yields per acre in 1935-39 are Algeria (8.4), French Morocco (7.1), Tunisia (7.9), Union of South Africa (8.4), Basutoland (5.2), Palestine (6.1). These are all countries with subtropical climates.

It is common knowledge that the moisture content of the soil at seeding time, which is largely determined by rainfall in summer and early autumn, is very important in fixing the yield that may reasonably be expected. In the United States, optimum seeding conditions are believed to involve a soil moist to a total depth of about three feet (say one meter). Wheat is often planted in Palestine on soil of which the total depth is much less than this, and the moisture depth at seeding time is probably almost always less than the optimum. Moreover, high temperatures (especially if accompanied by hot dessicating winds, such as the Palestine Khamsin) when the plant is at the heading stage or between heading and ripening, interfere with the development of the plant, resulting in shrunken grain of low test weight and low yield. The heat and dryness cause transpiration in excess of the ability of the plant roots to draw moisture from the soil. These unfavorable wheat-growing conditions are common to all subtropical countries, and they are of dominant importance in Palestine.

In the years 1936-39 over three-quarters of Palestine's wheat production was consumed on the farm, where the question of competition with imported produce had only a limited significance.

ESTIMATED PALESTINE WHEAT POSITION, 1936-39

	Arab	*Jewish*	*Total Domestic*	*Import*
Average production, in metric tons	73,100	9,500	82,600	
Supply to non-farm consumers	15,000	4,200	19,200	105,000*
Percent of gross returns from farming (excl. citrus)	16%	8%	14%	

Source: Authors' combination of various Palestinian estimates; does not entirely agree with official figures. *Wheat flour in imports converted to wheat at milling rate of 80 percent.

The Fellah grew wheat primarily for his own bread, and the Jewish farmer sold less than half of his produce to urban consumers. Yet the small amount of Palestinian wheat that did reach the urban market brought the farmer so little, in competition with imported wheat and flour, that there was continuous pressure for tariff protection. The Government yielded to this pressure by establishing a sliding scale of duties designed to stabilize the price of wheat on the farm at £P 9.0 per ton and the price of flour at £P 12.5 per ton. Wholesale prices of Palestinian wheat averaged about £P 9.86 per ton during the years 1933-39. Palestine urban consumers had to pay much higher prices for wheat and flour than prevailed on world markets. The following table indicates how high Palestine prices were even before the impact of war on supplies from abroad.

Due to Palestine's fundamental natural disadvantages in wheat growing, these prices did not suffice to bring about an expansion of the cultivated area under wheat or wheat output. Even the fantastic wheat prices of the war years have also apparently been of no avail. The Government of Palestine attempted to "stabilize" the price of wheat at £P 24-£P 25 per ton ($2.61 to $2.72 per bushel), but after 1942 no wheat was available for sale at these prices. Prices rose steadily until, in the calendar year 1944, black-market wheat was selling in Palestine at £P 45-£P 60 per ton ($4.90 to $6.53 per bushel). The Government of Palestine itself bought wheat from Transjordan at an average price of £ 40 per ton; popular reports insists that some of this was actually Palestinian wheat.

PALESTINE AND WORLD ANNUAL WHOLESALE PRICES OF WHEAT
(In U.S. dollars per bushel)

Year	*Palestine (local)*	*United States (6 markets, all classes and grades)*	*Canada (Winnipeg, No. 3 N. Manitoba)*	*Argentina (B.A., No. 2 semi-hard)*
1931	0.92	0.55	0.47	0.47
1933	1.21	.91	.62	.56
1935	1.19	1.00	.77	.82
1937	1.37	1.06	1.17	1.12
1939	1.20	.86	.64	.60

Source: U. S. Dept. of Agriculture, *Agricultural Statistics*, 1944 and *Statistical Abstract of Palestine*, 1943. All values converted to U. S. dollars at N. Y. annual average rates.

Government figures show that, in spite of this rise in prices, the planted area under wheat fell from 2,203,000 dunums in 1940 to 1,772,000 in 1943, and the yield declined from 136,000 tons to 64,000 tons.* The supposed decline is wholly attributable to Arab villages, Jewish wheat production having admittedly risen from 10,000 tons in 1938-39 to 14,000 in 1943-44. It may well be that the apparent decline in wheat output is wholly due to evasion of control. Yet it does seem true that there has been no notable expansion in Arab wheat output. In 1942 Palestine had to make net imports of nearly 100,000 tons of wheat,† and in each of the years 1943 and 1944 net imports have been of the order of 135,000 tons.

In view of her basic natural disadvantages as a wheat producer, wheat does not seem to us to be a commodity in which Palestine should attempt to displace imports, in normal times. Dr. Samuel, in his table, which we have reproduced above, estimates that Jewish urban consumers in 1937-39 consumed about 150 kilograms per capita of wheat, of which about 12 kilograms were produced on domestic Jewish farms; he specifies that, after a long development period, this may rise to 20 kilograms per capita (out of a total of 140 kilograms). We suspect that such a development would be an index of agricultural stagnation rather than progress.

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* One published official source gives 66,000.

† Including wheat equivalent of flour at 90 per cent wartime milling.

We are disturbed by the fact that Dr. Samuel is prepared to accept a postwar wheat price of £P 16 per ton ($1.74 per bushel) for Palestinian wheat on the farm, compared to a prewar price of £P 9.0 It is all the most disturbing that Dr. Samuel's £P 16 wheat price is presented in a framework of a cost-of-living index of 140 in £P (1937-39 = 100). In view of the devaluation of the £ since 1937-39 by 16 percent, this would mean an index of 118 in terms of dollars. In the season in which the United States cost-of-living index was closest to 118, namely 1942, the price of wheat per bushel received by United States farmers (on the farm) averaged $1.10. The United States Department of Agriculture estimated the average cost of production that year at $0.77 per bushel. In arguing that Palestinian farmers will need $1.74 per bushel, Dr. Samuel is in fact conceding that Palestine is an irredeemably inefficient wheat producer.

We suggest that subsidization ("protection") of Palestinian wheat production is economically undesirable. Her difficulties as a wheat producer are not temporary, and her outlook is not promising. The Fellaheen are wise to refuse to expand their wheat cultivation. That way is a blind alley. The Fellaheen will certainly continue to grow wheat for their own bread, as will many Jewish farmers. Moreover, so long as wheat is grown at all, it is worth while learning to grow it as well as possible. But wheat raising should not be subsidized nor should there be any encouragement to the expansion of the cultivated area devoted to this crop. Palestinian agriculture must learn to take advantage of its peculiarities of soil and climate, not waste its strength in pretending that Palestine is a land of broad temperate plains.

Vegetables

In vegetable growing, Palestine's comparative natural position is very different than in wheat. She has great natural advantages of climate and season, which fit her to supply a very large part of her domestic requirements and to be an important exporter at certain times of the year. Palestine's farmers have made a start at exploiting these natural advantages. While they have been content —in spite of a growing population—not to expand their wheat acreage or output substantially for two decades, they have multiplied their vegetable output 13 times over in 13 years. Both Arabs and Jews have taken part in the expansion of output, but, if its cause is to be found in any single factor, that factor is the growth of urban markets following the new wave of Jewish immigration that began about 1932.

The following table shows how extremely rapid this increase of output has been, whether measured in crude tonnage terms or by an index designed to give weight to the value of product.

OUTPUT OF VEGETABLES IN PALESTINE, 1926-43

Average of years	*1926-30*	*1931-35*	*1936-39*	*1940-43*
Output in tons	15,410	33,010	107,290	202,760
Index, taking into account value of product	100	214	702	1,334

Source: *Statistical Abstract, Monthly Bulletin,* and unpublished index for 1943 furnished by Government Office of Statistics.

The development of a vegetable output that was 13 times as large in 1940-43 as it had been in 1926-30 meant a revolution in Palestine's agriculture, a change as profound—though much less remarked upon—as the growth of citriculture. In 1926-30 the value of Palestine's vegetable production cannot have amounted to 2 percent of the total value of her farm output, but in 1939 vegetable production accounted for about 12 percent, and in 1943 the share had risen to about 18 percent.

Both Arab and Jewish farms have contributed to the expansion of vegetable output. By far the larger tonnage is still provided by the former, but Jewish production gives greater weight to the more valuable crops. In 1942-43, Jewish farms produced roughly one-sixth as great a volume of vegetables, in tonnage terms, as were produced by Arab farms, but this output was worth about one-third as much as total Arab vegetable output. Subject to this very important qualification, the following table gives a very rough outline of the sources of Palestine's vegetable supplies. The figures for the prewar years are the more reliable because then there was little incentive to conceal the magnitude of harvests.

SOURCES OF PALESTINE'S VEGETABLE SUPPLIES

(*In metric tons*)

	Arab production	*Jewish production*	*Net import*	*Total*
1937–39	89,800	14,700	30,150	134,650
1942–43	189,500	31,500	4,600	225,600

Source: Authors' own combination of various Palestinian estimates.

Vegetable growing is peculiarly well adapted to Palestine's drive towards an intensive agriculture because it requires little capital as well as little land. Dr. Loewe has estimated that a crop area of 11.5 to 12.5 dunums of irrigated vegetables will provide a man-year of employment, while a crop area of 365 to 475 dunums is required in unirrigated grain growing. Moreover, the man employed in vegetable growing will need only £P 140-£P 210 in capital (prewar prices), while the one employed in grain growing will require £P 585-£P 670. Unlike irrigated fruit plantations, vegetables do not require years of investment before there is any return. Two, three, and even four crops a year are possible on the same soil, subject, however, to the qualification that very intensive irrigated use over several years is usually destructive of the health of the soil, resulting in poor structure as well as poverty of nutrients. Nevertheless, even a rotation that does not allow such continued intensive use works out to a high average intensity.

Successful vegetable growing is not tightly bound to any one type of soil or topography. Rich sandy loam soils are perhaps best, but—particularly under irrigation—excellent results are often achieved on heavier soils. In any case, Palestine has soils of both types. Flat land is advantageous where irrigation is required, but it is not absolutely essential—as it is where wheat is produced with modern machinery.

Sufficient water is of course necessary for success, but rain is not necessary—where reasonably cheap irrigation is available. In fact, rain may be regarded as a disadvantage in vegetable growing,* particularly when it comes during the hot season. A hot rainy climate favors the breeding of pests and the spread of plant diseases. (The hot humid southeastern part of the U. S. is perhaps the least successful area of the country in vegetable growing, while the naturally dry, irrigated southwest—particularly where it is near enough to the ocean to avoid the hottest weather—is perhaps the most successful.) Dry, irrigated areas are particularly advantageous for production of most types of seeds. Seed-borne diseases are much less prevalent on seeds grown in regions of low humidity and with little or no rain during the growing season. This climate is best too for pollination and setting. Absence of rain during harvesting also permits curing and threshing of seeds in the open.

Temperature is the most important consideration in determining where vegetables can be grown efficiently. Since prices are best when supplies are small, it is particularly advantageous for an area to have temperatures which permit harvesting exceptionally early or late crops. Most vegetables grow best at temperatures between 60° and 80° Fahrenheit (say 16° to 27° centigrade). Therefore the most favored growing areas are those which have these temperatures at times of the year when they are uncommon elsewhere. In this respect, Palestine has great advantages, with respect to European markets. Moreover, Palestine has a great variety of climates in spite of her small areas. It is of the greatest importance, for her success in vegetable growing and for her high ratio of attainable self-sufficiency in vegetable products, that her 10,400 square miles provide nearly the whole range of temperatures to be found in the 158,700 square miles of California, except for temperatures near and below the frost limit.

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* As also in citriculture.

Even in her coldest months of December and January, the coastal plain and Jordan Valley have temperatures suitable to vegetable growing; their monthly mean temperatures range from 54° to 61° Fahrenheit (12° to 16° centigrade). There are, however, longer periods when the climate of Palestine is too hot for good vegetable growing over almost all the country. This is particularly true because most of our present varieties of temperate vegetables develop their highest quality in the cooler parts of the regions or seasons to which they are adapted.

Onions and garlic show a very wide tolerance of different temperatures. They can be grown at monthly means ranging from 55° to 75° Fahrenheit (12° to 24° centigrade). Some part of Palestine can always be found with a monthly mean below this upper limit. Distinctly cool-weather vegetables, however, such as cabbages, beets, cauliflower, lettuce, carrots, peas, potatoes, etc., do best at monthly mean temperatures between 60° and 70° Fahrenheit (say 16° to 21° centigrade). Even the hill country of Palestine is too hot for these crops during the summer months.* Temperatures above the optimum call for very timely harvesting. The crop has poor keeping quality under such conditions. Vegetables grown at the upper end of their temperature range tend to suffer from loss of sugars. Cabbage and cauliflower acquire a very "strong" flavor and a dark color. Lettuce suffers from tipburn.

For these reasons, cucumbers, tomatoes, sweet corn,† and squash are easier to grow in Palestine than the more distinctly cool-weather vegetables. Vegetables such as tomatoes and cucumbers thrive at mean temperatures between 65° and 80° Fahrenheit (18° to 27° centigrade), and therefore they can be grown in parts of the coastal plain, much of the hill country, and the northern Negeb even during the summer. Sweet potatoes, eggplant, peppers, and asparagus require a mean temperature over 70° Fahrenheit (21° centigrade), and can therefore be grown over the widest summer areas.

As the table below indicates, Palestine vegetable growers have tended to concentrate their efforts on hot weather varieties, such as tomatoes, cucumbers and eggplant, or on onions and garlic, which are tolerant of wide temperature ranges.

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* And in the hills irrigation is difficult.

† As yet, almost unknown in Palestine.

AREA, OUTPUT AND VALUE OF PALESTINE'S PRINCIPAL VEGETABLES

	Year 1942			*Year 1943*		
Crop	*Area in 000's of dunums*	*Yield in 000's of tons*	*Value in 000's of £P*	*Area in 000's of dunums*	*Yield in 000's of tons*	*Value in 000's of £P*
Tomatoes	67.7	55.1	991.8	80.8	67.9	1,904.0
Onions and garlic	27.9	18.5	392.9	35.6	24.9	511.7
Cucumbers	23.3	20.4	347.4	26.4	18.9	509.0
Potatoes	19.7	22.8	916.6	16.0	15.0	717.1
Cauliflower	8.7	10.6	210.2	10.6	11.3	411.5
Eggplant	6.8	9.4	122.9	9.9	14.8	294.2
Cabbage	6.6	10.7	132.0	7.3	10.8	233.8
Other	56.8	46.7	750.5	78.5	65.3	1,836.6
TOTAL	217.4	194.2	3,864.3	265.1	228.7	6,417.9

Source: *Statistical Abstract,* 1943, and unpublished table furnished by the Palestine Government Office of Statistics.

These figures are not sufficiently accurate to be pressed to any very nice point. They do, however, suffice to indicate, in a general way, the concentration on relatively hot-weather varieties. In the United States, which has—on the average—a much colder climate than Palestine, potato production in 1942 and 1943 was valued a 4.0 times as much as tomato production. In Palestine, in the same two years, potato production was valued at only 0.57 times as much as tomato production.

Due to the nature of Palestine's climate and to the fact that a large part of her vegetable production (particularly the Arab output) is grown on land without irrigation, her supplies are shortest from August 15 to November 15. There is another period of relatively short supplies between March 15 and May 15, when the winter crops have been harvested but summer produce has not yet reached its full level. During these seasons of short supplies, prices rise sharply. Before the war, these price rises induced a substantial volume of imports. Taking all vegetables together, for the years 1936-39 imports accounted for 22 percent of Palestine's total supplies. Imports were of dominant importance the year round (except in April, May, and June) only in potato supplies. In supplies of onions and garlic, carrots, cabbage, cauliflower, cucumbers, and other vegetables, imports were primarily complementary to Palestine's own seasons. In potato supplies imports accounted for about 65 percent of the total and in onions and garlic about 44 percent, but in all other vegetables imports accounted for only 5.6 percent of total supplies.

During the war, Palestine demonstrated that she could produce fine potatoes in greater quantity than she had ever consumed. In 1942-43 production of potatoes was so high that some were used for cattle feed. Only the shortage of labor has prevented maintenance of production at a level substantially above domestic requirements and sufficient to provide a margin for export to neighboring countries. Moreover, due to Government initiative, there has been a great increase in storage facilities. In the future, Palestine's dependence on potato imports will probably be limited to seed potatoes and occasional seasonal supplements to her storable crop. Extension of production and added storage facilities have also shifted the competitive position of other vegetables. Yields of vegetables have risen where production has been included in the rotation of mixed farms. Jewish farmers have been extending their growing season to place more emphasis on the short supply months. Further substantial progress could be made immediately if irrigation facilities and labor were available. For these reasons—and in spite of the seasonal problem—we see no reason why imports of vegetables should account for more than 5 or 10 percent of Palestine's consumption in the postwar decade. But we do not believe that it would be advantageous for her to attempt to displace all imports. Extension of production to cover total consumption of all vegetables at all seasons would involve too great a cost. If Palestinian producers concentrate relatively on their seasons of greatest advantage, Palestine could be both a substantial exporter and a modest importer of vegetables.

Olives and Deciduous Fruit

We have chosen to discuss the problems of efficiency and competition in Palestine's wheat and vegetable production in some detail, not because they exhaust her growing and marketing problems but because these two farm activities are very nearly at the extreme opposite ends of the scale of her comparative efficiency. In no other farm activity except meat production does Palestine have less comparative advantage than in wheat growing. In no other farm activity except the growing of subtropical fruits does she have a greater comparative advantage than in vegetable growing.

It is an error to consider her agricultural potentialities as given, within very narrow limits, by natural factors of soil and climate. They are rather variable, over quite wide limits, by skill and effort. They are also subject to challenge by the exertion of greater skill and effort by Palestine's competitors. This challenge, response, and adjustment is a continuous process. Apart from the problems which we have discussed, Palestine has serious competitive problems in olives, deciduous fruits, in butter, in eggs, and in a great variety of other commodities. She is not in the position of the passive legatee of a great agricultural inheritance. Something may be said briefly of her competitive problems in the growing of olives and deciduous fruits.

The area under olives has expanded more than five times over during the past 25 years. Yields of olives averaged 16,000 tons over the four seasons 1926-29 and 69,000 tons over the two seasons 1942-43. The hill Arab plants olives as an aspect of settling down to a more stable, civilized life than that of a semi-nomadic herdsman. He has planted olives most lavishly during the past decade, and (since it takes about 12 years for unirrigated olive trees to bear fruit) he has not yet gathered the fruit. When it comes, it may be very meager. He can eat his olives, and the trees will conserve and improve his soil, but he will not make much money from his olive trees. The olive oil soap industry is dying—as a result of the competition of better soaps made from cheaper raw materials. Refined edible olive oils command little premium over other vegetable oils, and the world market for the highest grade unrefined oil is narrow. Pickling of olives for world markets encounters the competition of the whole Mediterranean area—and particularly of Spain and Italy.

The way of the olive grower is steep and narrow. Unless he is content to eat his own olives, he must aim at quality; unrefined oil of less than 1 percent acidity and large, fine pickled olives. Both of these products require much careful labor and long waiting—8 years for the first fruit even under irrigation. The Arab is currently not adapted to the careful picking and handling methods required, and the Jew is little interested in the low returns it seems likely to bring. Responsible public officials and students of agricultural problems are profoundly concerned about the future disposal of the Arab olive crop apart from home consumption. They are inclined to regard a careful and scientific olive culture as a marginal occupation for Jewish farmers except on a limited scale and after careful testing of markets. Under these circumstances, we must be wary of planners who people Palestine's uncultivated hill areas liberally with new villages subsisting, to an important degree, from olive culture.

Deciduous fruit plantations are in the same hazardous class, when regarded not as a supplementary farm branch but as a central activity on which to base new colonization. Palestine's climate is apparently not cold enough to produce even second-rate deciduous fruits, with present varieties. It is possible that better warm-weather varieties will be found, but at present these are unknown. In most parts of Palestine, apples, pears, peaches, and plums need irrigation, but their produce is of doubtful quality to justify the use of irrigated land. In the unirrigated hill country, fruit plantations take 5 to 10 years to come into full bearing. The Jewish settlements often have to borrow capital for their plantations at interest rates as high as 6 percent or 7 percent. Even at prewar prices, a dunum of unirrigated deciduous fruit—planted with capital borrowed at such interest rates—often came out to cost as much as £P 80 or £P 90 by the time it reached full bearing. If then its fruit was only of low-grade or cooking quality, the farmer was saddled with a doubtful asset.

As the table below indicates, the growing of deciduous fruits would provide employment for only about 2,500 Jewish farm workers even if they were to supply 100 percent of Jewish Palestine's consumption of deciduous fruit (at the 1937-39 urban consumption level) for a Jewish population of 1,800,000 people. Until Palestine finds deciduous varieties suitable for export, it is therefore only paper planning to "colonize" the country with deciduous fruit growers.

OUTPUT, DEMAND AND EMPLOYMENT IN DECIDUOUS FRUIT

1. Output of deciduous fruit per irrigated dunum, at full bearing	1,200 kilograms
2. Farm area per man-year of employment, at full bearing	15 dunums
3. Output per man-year	18,000 kilograms
4. Various assumptions of per-capita Jewish consumption:	
(a) 1937-39 *total* Jewish urban consumption per capita	25 kilograms
(b) 1937-39 Jewish urban consumption from Jewish farms	2 kilograms
(c) Consumption competitively derivable from Jewish farms after development (Dr. L. Samuel)	15 kilograms
5. Employment provided by Jewish population of 1,800,000 according to various assumptions:	
(a) According to 4(a)	2,500 man-years
(b) According to 4(b)	200 man-years
(c) According to 4(c)	1,500 man-years

Source: Based on information supplied by Dr. L. Loewe and Dr. Ludwig Samuel.

We do not wish, by these brief notes on the problems of growing olives and deciduous fruits in Palestine, to suggest that they can provide *no* opportunities for further agricultural employment, at a satisfactory standard of living. There are, however, basic difficulties in the way of their becoming *major* sources of additional employment. The way to making them the foundation for large-scale colonization has not yet been found and does not at present appear to be promising.

LAND AS A LIMITING FACTOR IN AGRICULTURAL DEVELOPMENT

From a strictly economic point of view, too much attention has been focused on land problems in Palestinian agriculture, as opposed to problems of capital requirements, growing methods, and marketing. Far-reaching positive and negative conclusions with respect to Palestine's whole economic future have been drawn from simple physical facts of land area, water supply, topographical suitability of land for irrigation, etc. The most far-reaching conclusions of all are the negative ones of the Mandatory Government, as embodied in the official *Statement Explanatory of the Land Transfer Regulations*, published on February 28, 1940. The Government of Palestine there declared explicitly that there is little room in Palestine for land transfer to Jews from Arabs. Such transfers, the Statement declares, would involve serious threats of undermining the Arab farmer's standard of living. The Statement suggests also that Palestine's cultivable land is so densely occupied that there is little room for expansion of agricultural employment.

In our view, this negative official position is quite without foundation. It is not based on any thorough study of Palestine's agriculture or land resources. It reflects merely a lazy identification of the possible limits of cultivation with actual ones—an identification more lightly adopted because it was in line with political pressure to exclude Jewish immigrants from Palestine. Without the creative drive of the immigrants, the future pattern of land use would indeed probably only very slowly develop any marked divergence from the present one. That does not mean that the present pattern is fixed by nature. Palestine is not an intensively cultivated country, like Egypt. It is half-way between Egyptian intensity and, let us say, Iraqian rural under-population.

Even the most casual observer can see that in Palestine much land is not cultivated at all, and most of the cultivated area is used in a most superficial manner. If land under irrigation or permanent plantations is reckoned to be intensively used, at present a maximum of 2 million dunums of land are under intensive cultivation. This amount compares with a total land area of about 26.3 million dunums and a "cultivable" area variously estimated between 8.7 million dunums and 10.5 million dunums. Given the possibilities of soil amelioration and irrigation, given the development—over time—of the requisite agricultural skills, and granting flexibility in adapting output to changing marketing possibilities, Palestine's land use can gradually be extended and modified to support a very much greater agricultural population than her present one.

On the other hand, we are skeptical of the economic value of any analysis which bases far-reaching positive conclusions concerning absorptive capacity solely on data with respect to Palestine's land area and irrigability. It is not uncommon even, in a certain class of literature on Palestine, to treat land as if it were the unique determinant of the magnitude of all economic activities. One recent study, for instance, determines that the additional irrigable area in Palestine is about 3,400,000 dunums. Dividing that 3,400,000 dunums by a farm area of 25 dunums per family, it comes to the conclusion that there is room for about 136,000 additional families in Palestinian agriculture. Assuming a "standard" relation of four families outside agriculture to each family in agriculture, this study calculates that an additional 544,000 families could be employed outside agriculture. Further assuming a "standard" family of 4 persons, this study concludes that irrigation will "provide" for the absorption of an additional 2,720,000 people.

The student arrives at the final figure presented by the abovementioned study breathless—and deceived. The economic problem has been entirely omitted. The conclusion has been reached without specifying what the added rural or urban population is to produce. The final absorptive capacity estimate is the result of a timeless analysis, while the essence of all real economic adjustments is that they take time. A technical judgment of irrigation possibilities has been confused with an economic judgment of production possibilities. As a result of this confusion, the future has been given a kind of fixity which the uncertainty of economic adjustments defies. Such far-reaching projections serve to break down the barriers of the lazy imagination, which is always too prone to identify the possible with the actual, but they are a very insecure basis for current operations. Other irrigation experts "prove", on the basis of a more optimistic evaluation of irrigation possibilities, that Palestine can absorb (without specification of time or means) an additional 5 million or 10 million people. The same formulae would no doubt show that the United States can absorb an additional 500 million or 1,000 million. The economist is not in a position to confirm or deny such estimates.

Land Requirements

So far as we can see, the maximum amount of additional irrigated land for which marketing or farm consumption needs will make demands in Palestine during the next decade is of the order of 1.75 million dunums. Many experts would regard this as a very high estimate of economic requirements. Yet this figure is lower than the lowest estimate of irrigation possibilities advanced by any reputable authority. Even the Water Commissioner of the Government of Palestine agrees that at least 2.0 million dunums of additional land can be irrigated. Therefore the supply of irrigated land need not constitute a limitation on the expansion of Palestine's agriculture during the coming decade.

Our estimates of the upper range of probable requirements of irrigated land, for a progressive expanding economy, are presented below. All requirements are expressed in dunums available for cultivation; i.e., excluding land for houses, barns, community buildings, access ways, etc.

UPPER RANGE OF ADDITIONAL IRRIGATED LAND REQUIREMENTS
(1945-1954; in dunums; immigration 1,250,000)

Purpose of land use	*For Arab farming*	*For Jewish farming*
For the expansion of citriculture	90,000	110,000
For other export crops	17,000	83,000
For 36,460 new intensive Jewish farms for domestic markets		948,000
For the intensification of Fellah farming	500,000	
TOTAL	607,000	1,141,000

We do not suggest that these figures are exact measurements of future irrigated land requirements, even assuming the validity of our general assumptions. To know the exact requirements we would have to know more about the pattern of output, crop rotation, and related matters than can be specified accurately at the present time. These figures are intended merely to suggest the rough order of the magnitudes involved. The citrus and other export land requirements were derived in our discussion earlier in this chapter. The other two groups of requirements will be discussed briefly below.

The determination of the land requirements for Jewish mixed farming is summarized in the following table:

ESTIMATED ADDITIONAL IRRIGATED LAND REQUIRED FOR JEWISH "MIXED" FARMING, 1945-1954
(In dunums)

Total Jewish population at end 1954 on assumption of 1,125,000 net Jewish immigration	1,826,000
Average number of non-mixed-farm consumers per mixed farm	38.5
Maximum number of non-mixed-farm consumers in 1954 (assuming mixed farm families only 80 percent as large as other families)	1,726,000
Number of mixed farms required for whole Jewish population	44,800
Deduction of estimate of Jewish mixed farms now in existence (converted to standard farm "units" by dividing 1943-44 output of £P 1,812,000, at prewar prices, by £P 217.5—the average output, at prewar prices, per farm "unit")	8,340
Number of additional mixed farms required by population growth and widened range of competitive ability	36,460
Irrigated land area required for 36,460 additional farms (26 dunums per farm, though all land would not be irrigated all the time)	947,960

Source: Derived from basic data presented in Chapter 14 and in the discussion of *Domestic Food Requirements* earlier in the present chapter.

The setting aside of as much as 500,000 dunums of irrigated land for the intensification of Fellah farming will no doubt seem to some well-informed judges a piece of paper extravagance. Almost all students of Fellah farming whom we were in a position to consult doubted that it would be possible in a decade to achieve so profound a revolution as would be required to teach the Fellah to use so much irrigated land profitably. Yet, in our judgment, a target of this kind is necessary, if the intensive development of Palestine's resources is to go along with a material improvement of the Fellah's standard of living and a constructive atmosphere in which the foundation can be laid for reconciliation between the Arab and Jewish peoples. Such a program will require far-reaching measures of land reform (particularly the formation of consolidated holdings), agricultural instruction, and agricultural credit. It will be one of the many directions in which Palestine, after mobilizing its own capital and skill, will have to call for assistance from the capital and technical ability of more advanced countries. Such a program will be particularly difficult to accomplish in the present atmosphere of estrangement and distrust which prevails between the Arab and Jewish peoples. However, large-scale immigration into Palestine, in a very short time, cannot be accomplished without tremendous efforts in all directions. Only extraordinary effort and considerable good-will on all sides will make it possible to accomplish an immigration of the order of magnitude we have projected.

On our highest immigration estimate, with a net inflow of 1,125,000 Jews and 125,000 non-Jews, the non-Jewish population will grow by about 536,000 in the next decade. Roughly 40 percent of this increase will probably have to be maintained by agriculture. Some 70,000 (including workers and dependents) may be sustained by the expansion of citrus and other export crops, but something of the very rough order of 145,000 persons, in addition to the number at present deriving their sustenance from Fellah farming, will be added to the Fellah farm population. We are not suggesting that these 145,000 be selected, by some special process, to be settled on exclusively irrigated land. Most Fellah farms need first to pass through a semi-intensive stage, where they have some irrigated cultures and use irrigation water especially in the dry season. The addition of some 500,000 dunums of irrigated land to their unirrigated fields would raise the whole level of their farm operations and facilitate the process of the absorption of a growing farm population.

Among the measures which are most necessary in Palestine land reform is the substitution of a true Land Settlement, designed to facilitate intensive farming, for the present one which gives little more than certainty of title. The long, narrow strips into which Arab fields are divided must be abolished. Land must be exchanged among families so that it can be formed into workable blocks. The Fellah must be freed from the necessity of wasting so much of his time in going from one to another of his ten or more plots. He needs to be freed of the burden of coming to an agreement about land use with 30 or 40 partners. The offering of irrigation to a village may be a fruitful occasion for reexamining this present unsatisfactory system of landholding. When the Fellah is being offered something valuable, he may be willing to consider the reshuffling of holdings in a more constructive mood than otherwise. It may be possible, under such circumstances, to convince him that this is not merely another case where Government officials are coming to take something away from him. If the experiment is handled with tact and skill in a few initial cases, news of its benefits will spread and later activities will encounter less suspicion. It is a long, hard road, but a necessary one.

Our above rough calculations suggest that an expansion of Jewish agriculture of the maximum magnitude we have outlined will call for the cultivation by Jews of approximately an additional 1,141,000 dunums of irrigable land. Not all this land would be under continuous irrigation, but it would need to be irrigable plain land so that it could take its turn in an irrigated rotation. In the measure that irrigable land is unavailable—and while some unirrigable land in districts with good rainfall may be substituted on a 1 for 1 basis, with proper shifts in crops—in general, in Palestine north of the Negeb, at least 4 unirrigated dunums must be substituted for 1 irrigated dunum. It will not, however, be necessary for Jews to buy all the land required for this agricultural expansion. Some of it can be derived from more intensive use of the land they now own. The tables on page 476, based on careful studies of the Jewish National Fund, outline the intensification possibilities of land that was in Jewish ownership at the end of 1943.

From these tables, it emerges that in 1943 Jews owned 1,599,000 dunums in northern Palestine and cultivated about 701,000 dunums, of which about 208,000 were irrigated and about 493,000 unirrigated. The Jewish National Fund has calculated, examining the land dunum by dunum, that out of the same land holding it would be possible to develop 576,000 irrigated dunums and 425,000 unirrigated dunums. Weighting the irrigated land by the minimum factor of 4, the 1943 cultivated area comes out to be the "equivalent" of 1,325,000 dunums while the "equivalent" total when intensified is 2,729,000 dunums. We are convinced that this equivalent

TABLE 16: PRESENT STATUS OF LAND OWNED BY JEWS, END OF 1943

(*In thousands of dunums*)

District	*Jewish farm employment*	*Jewish irrigated land, cultivated*	*Jewish non-irrigated, cultivated*	*Jewish urban and industrial areas*	*Total Land Owned by Jews*
Safad	802	5	51	0.2	170
Tiberias	2,010	13	73	1.3	179
Beisan	1,598	13	73		126
Nazareth	1,986	5	83	5.0	127
Haifa	5,268	36	117	82.1	353
Acre	441	1	3	.1	26
Tul Karem	3,483	36	22	18.1	142
Jaffa	5,700	49	16	50.4	124
Ramleh	4,038	42	28	18.4	129
Gaza-Ruhama	572	9	25		68
Hebron-Jerusalem	280		3	14.5	39
Government concessions				90.3	116
TOTAL	26,178	208	493	280.3	1,599
Beersheba					61
GRAND TOTAL					1,660

TABLE 17: INTENSIFICATION POSSIBILITIES OF LAND OWNED BY JEWS, END 1943

(*In thousands of dunums*)

District	*Gross agricultural area*	*For settlements roads, uncultivable*	*Forest area*	*Irrigable area*	*Non-irrigable area*
Safad	170	22	32	88	27
Tiberias	178	23	27	43	85
Beisan	126	15	8	47	55
Nazareth	122	13	8	8	93
Haifa	271	39	24	121	86
Acre	26	2	7	5	11
Tul Karem	120	24		96	
Jaffa	75	15		60	
Ramleh	113	20	3	70	20
Gaza-Ruhama	68	9	6	21	32
Hebron-Jerusalem	25	2	7		15
Government concessions	25	4	4	17	
TOTAL (exclusive of Beersheba)	1,318	190	127	576	425

Source: Detailed unpublished studies of the Jewish National Fund. These tables are condensed summaries of data furnished to the authors by Messrs. J. Weiz and S. Lifschitz. (Due to rounding, sub-totals do not necessarily agree with totals exactly.)

more than doubling is not a paper calculation but rather understates the value of intensification. Our own rough calculation of the change in value of attainable output suggests that a case could be made out for the thesis of an approximate tripling.

Intensification Projects

It would, however, in many cases be very expensive and, in some cases, physically impossible to intensify Jewish agriculture through irrigation without developing joint projects also taking in Arab lands. In appreciation of these facts, the Jewish Agency's Planning Commission, at its Rehovot Agricultural Station, has in hand an extremely thorough land and land-use study, involving joint Arab-Jewish intensification. It is impossible to review this study in detail here, because it proceeds plot by plot and village by village. A general outline of its first installment may, however, be given.

A land area of some 750,000 dunums, lying principally in the Esdraelon Valley, was chosen for initial examination. A detailed geological and botanical review was made. Water resources were determined. A soil survey was undertaken with drillings to a depth of 2.1 meters, each drilling normally involving about 7 layers. Drillings were made at intervals of 200 dunums; by the end of 1944 more than 4,000 samples had already been taken from an area of 700,000 dunums. The soil was analyzed for depth, lime content, heaviness, mechanical properties, salts and alkalis, organic matter, and related characteristics. Adequate contour information was already available from previous investigations.

Once these physical facts were established, economic information on the land use pattern was assembled village by village. The villages were then replanned so as to permit more intensive culture, with detailed specification of field layout, outputs, equipment, and incomes (at prewar prices). In no case was the plan drawn so as to involve moving the built-up center of any village. The standard size of farm for an Arab family was established at 54 dunums and for a Jewish family 25 dunums. These two extremes were chosen despite the conviction of the planners that an ideal type for this area might be about 36 dunums. The Arab area was made larger because of the need for a gradual transition to intensive cultures. The Jewish area was made smaller to create pressure for intensive use. The semi-intensive Arab farm was designed to yield a net income of £P 75.6 at prewar prices—more than twice the income of representative Arab farms in the prewar period.

On this basis, the planners of the Rehovot Station have estimated that intensification of the 750,000 dunums which they have studied first would provide room for about 18,000 new farm "units" (or about half as many new mixed farm units for Jews as would be required, as a maximum, on our highest immigration assumption). We are greatly impressed with the thoroughness with which this investigation has been done and attach great value to its results. Nevertheless we cannot testify to its exact validity; we have not been in a position to review the underlying work at every step. We believe, however, that a very generous margin of safety would be provided by deducting one-third from the number of new farm units which the Rehovot planners believe it possible to establish in this area. That would still leave room for 12,000 new units to be established in this area of 750,000 dunums, side by side with revolutionary improvement of the existing Arab and Jewish farms. The results of this careful study afford basis for confidence that a similarly thorough examination would show room for a sizable number of additional farms in the other plain areas of the country. This method of joint Arab-Jewish intensification, under Government guidance and assistance, must be the main road of agricultural expansion in the next decade if Palestinian farming is to grow and prosper for the benefit of both of its major peoples.

Amelioration Plans

We must give at least brief mention to another very large study of Palestine's land cultivation and cultivability even though it affords, in our judgment, a less secure basis for current operations. This is the unpublished land study of the Jewish National Fund. It is also executed with great attention to local detail but focuses primarily on uncultivated land and its amelioration, rather than on the intensification of presently cultivated areas. The first step in this study is the determination of the magnitude of actual cultivation. After a very detailed examination in the field, this investigation came to the following conclusion, so far as Palestine north of the Beersheba subdistrict is concerned.

EXTENT OF CULTIVATED LAND IN NORTH PALESTINE, WAR YEARS
(*In dunums*)

Total area examined	*Land not cultivated at all*	*Land cultivated from 1% to 20% of total area*	*Land cultivated from 21% to 100% of total area*	*Built-on area*
13,538,000	3,501,000	1,740,000	8,136,000	161,000

Source: Unpublished study, supplied by Mr. J. Weiz and Mr. S. Lifschitz of the Jewish National Fund.

After determining the extent of cultivation, this study concentrated on carving colonization blocks out of the area of which at present not more than 20 percent of the total surface is cultivated. No land was considered available for colonization until the local resident population was provided with 10 dunums per head, more was left to the present population where they were actually using it. No land was considered available for colonization unless it could be formed into blocks of a minimum size of 3,000 dunums (sufficient to establish a small village). In this way 94 blocks were carved out of the uncultivated or little cultivated land. The character of their soil was then studied to determine the magnitude of the required outlay for soil amelioration prior to cultivation. Land was rejected as uncultivable if it was estimated to require more than 60 man-days work to reclaim a single dunum. A summary of the results of this amelioration study is presented in the following table.

POSSIBILITIES OF CULTIVATING UNCULTIVATED LAND
(*According to the Jewish National Fund*)

Class of reclamation	*Gross area (in thousands of dunums)*	*Area that can be made cultivable (in thousands of dunums)*	*Number of farm units that can be established (J.N.F.)*	*Man-days required for reclamation (in thousands)*
(1) Soil improvement only	2,096	655	20,448	22,375
(2) Soil improvement and local irrigation	43	27	1,088	1,048
(3) De-salting from the Jordan or wells	205	139	5,496	1,690
(4) Reclaiming sands with local irrigation	136	109	4,340	543
(5) Irrigation from distant sources *	733	150	3,000	1,800
TOTAL	3,213	1,079	34,372	27,456

Sources: Unpublished tables furnished by Messrs. J. Weiz and S. Lifschitz of the Jewish National Fund. * Consists of 6 blocks in Beersheba sand hills.

We cannot give the same degree of adherence to the results of this study by the Jewish National Fund, despite its thoroughness, as seems to us justified in the case of the land intensification plan developed by the Rehovot Agricultural Station. The J.N.F. results may well prove to be sound from a technical point of view, but they have not yet been proven technically on a large scale and, from an economic point of view, they are extremely dubious. The land which we have marked class (1) is almost exclusively hill country, and the economic basis for large-scale hill colonization is very shaky. Much the same negative reservations with respect to economic feasibility must be offered, at present, with respect to large-scale de-salting from the Jordan or irrigation of the Beersheba subdistrict from distant sources. No general negative should be expressed with respect to these types of colonization for the long run, but their feasibility at present is unproved or proved only on a very small scale. These land reserves are therefore not in the first line for large-scale colonization—though a few villages might no doubt advantageously be established on them in the near future. We do not agree with the position suggested by the above table—namely, that a way has been shown to establishing 34,372 farm "units" on uncultivated or little-cultivated land. On the contrary, we believe that the main road lies in a quite different direction.

It is extremely unfortunate that all the systematic large-scale work that has been done on land-use possibilities in Palestine during recent years has been done exclusively by Jewish national institutions. Despite its responsibility for the economic development of the country, the Government of Palestine has done nothing in this field. The soil survey carried out by the Rehovot Station in connection with the intensification of the northern plains is eminently the kind of thing a government should do, but there was no official participation in this work beyond informal personal contacts by a few Government officers. The fascinating, and extremely important, work that has been done by Jewish bodies on the de-salting of the saline lands of the Jordan valley has been carried on without any Government assistance. It is a tragic fact that the conviction is even so widespread in Palestine that the Government is actively *opposed* to economic development that some of the humbler workers on the actual de-salting areas told us that the Government disapproved of their activities. Until this passive or negative attitude is reversed, rapid progress cannot be made in developing land-use possibilities.

LABOR AS A LIMITING FACTOR

For the agricultural expansion projected above, Jewish agriculture would require, by the end of the next decade, a working force of something like the magnitude in the table on p. 481.

The labor requirement figures above are *not* minimum estimates. Assuming adherence to our goal of an annual income* of £P 85.0 to £P 90.0 per worker (at prewar prices), Jewish agriculture is more likely to require a smaller labor force than the one outlined above rather than a larger one.

Even a somewhat smaller labor requirement than this, however, would confront Jewish agriculture with a great problem of labor supply and training. In 1939 about 37,000 Jews were employed in agriculture, but in 1943—with the wartime decline of citrus—the number employed had fallen to a maximum of 28,000. It is doubtful whether most of the Jewish workers who have left agriculture can be induced to return. Even at something like £P 90 per annum (prewar prices) farm occupations could not compete with urban ones, on strictly economic grounds, except at the lower end of the income scale. For this reason—if Jewish agricultural employment is to expand—Jewish farms must be well enough equipped to yield an income of at least this magnitude. At a much lower income level, farm employment will attract only those who prefer it strongly for reasons of personal taste or ideology or who cannot find any other employment. This is not the kind of labor force that can be counted upon to develop the skill which will make it possible for Jewish agriculture to extend the range of its output by increasing its competitive power.

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* Since this is an income concept, we of course disregard all capital transactions such as net saving or repayment of debt.

LABOR REQUIREMENTS OF JEWISH AGRICULTURE AFTER A DECADE

(*In man-years of 300 working days*)

	Requirements for the expansion of citrus and other export crops	*Requirements for farming to supply domestic markets*	*Total requirements*	*Percent of total labor force that would be employed in agriculture, assuming 41% of population in labor force*
Assuming no immigration	40,000 to 45,000	17,750 to 19,100	57,750 to 64,100	21% to 24%
Assuming net immigration of 616,000 Jews	40,000 to 45,000	35,100 to 37,800	75,100 to 82,800	14% to 15%
Assuming net immigration of 860,000 Jews	40,000 to 45,000	42,000 to 45,100	82,000 to 90,100	13% to 14%
Assuming net immigration of 1,125,000 Jews	40,000 to 45,000	49,300 to 53,200	89,300 to 98,200	12% to 13%

For the immediate expansion of its output, it is doubtful whether Jewish farming will be able to rely principally on recent immigrants. Too few of them will have the requisite agricultural experience or inclination. The best elements of the expanding agricultural labor force will probably be found in Youth Aliyah graduates, in the second generation of the present farm communities, and in Palestinian townspeople who go to work in agriculture for ideological reasons. (It is a remarkable characteristic of the social complexion of Jewish Palestine that "bourgeois" families are often proud to have their children go to work in collective settlements, to learn something of agriculture and to live the life of a collective society.) Immigrants will serve, at first, only as a "diluting" element. Because of their capacity for diluting their skilled laborers with green workers, both the collective settlements and individual commercial farms are likely to play a larger part than the cooperative farms in any rapid agricultual expansion. But even the training possibilities of the collective and commercial farms need supplementing by more (and cheaper) agricultural schools than Palestine has today. The agricultural schools, in turn, need more trained staff and facilities.

These problems of the quantity and quality of the labor supply for the expansion of Jewish farming are basic. Even on the assumption of very large scale immigration, the problem of quantity will not be solved without a shift in prewar relationships between urban and farm income in favor of farming. The larger the immigration, the greater will be the problem of training and dilution. Due to the uncertainty with respect to the political limits of immigration, little progress has been made as yet in Palestine in laying realistic plans for this training job.

In Arab farming, as we have indicated above, there is little problem of an adequate labor supply so far as quantity is concerned. The Arab village has a substantial reserve of labor. The quantitative problem of the Arab labor force is rather the development of sufficient opportunities for work in intensive farming and urban jobs to make some permanent dent in the solid core of village underemployment. However, so far as quality of work is concerned, the Arab farmer still has a great deal to learn, particularly in intensive cultures, dairying and market poultry raising. It is wrong, perhaps, in this context, to speak of "the Arab farmer" in general because the range is so great from the illiterate seminomad who occasionally sows an extensive barley crop, through the settled olive or wheat Fellah, to the effendi who may operate a modern commercial farm. Yet of the Fellah in general it is true that he has a great deal to learn and is suspicious of innovations. He learns only by example, slowly, and accepts instruction unwillingly even when it is offered by another Arab. Given water, he will almost unfailingly over-irrigate. Given a prize bull, he is likely to slaughter it for meat. Spraying to control pests is an activity outside his traditional range. He does not take much to pruning.

It will be an extremely difficult task to make the Fellah a progressive, more intensive farmer. If this change is to take place rapidly, Palestine will have to call for a large amount of outside assistance. The British Empire, the Soviet Union, and the United States might each contribute something of their knowledge of improving the agriculture of backward peoples. But such assistance will be of little avail unless it is welcomed, and the character of the welcome depends on the general political and social atmosphere. In the backwardness and comparatively limited adaptability of the Fellah lies another really basic factor limiting the rapidity with which Palestine's agriculture can progress in the next decade.

CAPITAL REQUIREMENTS OF AGRICULTURAL EXPANSION

The tables on the following page give a general outline of the capital requirements of the program of agricultural expansion discussed in this chapter. It must be emphasized that, in this program, capital is effectively substituted for land on a very thoroughgoing scale. Should it prove feasible, particularly in Jewish agriculture, to follow a more extensive, less-irrigated pattern than is suggested above, capital requirements for farm equipment would be reduced—but the outlays required for land acquisition and soil amelioration would, in our judgment, rise more than proportionately.

This question of the costs of land acquisition and amelioration is a very difficult one. It is embittered by the conflict between Jewish and Arab national aspirations and by Arab feeling that the Jew wishes to cheat him out of his land and country. Even in 1933-36 Jews paid about £P 6.62 per dunum ($128 per acre at 1933-36 exchange rates) for the rural land they bought in Palestine. With the increased population and urbanization of the country, more and more rural farm land is getting close to cities; its value is therefore augmented by the pressure for urban and suburban uses. Moreover, under the pressure of wartime speculation and inflation, the price of rural land purchased by Jews rose in value (including value of improvements) to over £P 60 per dunum (over $975 per acre) in 1944. The average rural land purchased by Jews in Palestine cost four times as much as the average value of farm land in the U.S. in 1933-36, but it cost more than twenty times as much as the average U.S. value in 1944.

Moreover, the land purchased by Jews in Palestine often requires an outlay of one-quarter or one-third its purchase price for amelioration prior to effective agricultural use. The reclamation requirements outlined by the Jewish National Fund, in its study summarized above, would involve 27,456,000 man-days. This would mean a cost of £P 7,650,000 for labor alone, at a prewar wage scale of £P 0.275 per working day. It would mean a cost of £P 11,475,000 for labor in the "postwar" prices in which we have expressed our other capital requirements.

As we have indicated above, we do not consider the land carved out for reclamation by the Jewish National Fund study as economically suitable to form the main basis for the immediate expansion of agriculture in Palestine. Therefore we do not expect amelioration requirements of anything like the order of magnitude suggested by the Jewish National Fund to materialize in the coming decade. The rejection of the direction suggested by the Jewish National Fund means, however, that agriculture must expand primarily in the irrigable plains. What kind of land costs can agriculture reasonably bear in these plains?

TABLE 18: CAPITAL REQUIREMENTS FOR THE EXPANSION OF JEWISH AGRICULTURE, APART FROM COSTS OF SOIL ACQUISITION AMELIORATION OF LAND, HOUSING, AND GENERAL IRRIGATION WORKS OFF THE FARM

(In "Postwar" prices, equal to 150% of 1938 in £P or 125% in $)

	Requirements for the expansion of			
	Citrus	*Other export crops*	*Farming to supply domestic markets*	*Total Capital Required*
Assuming no immigration	£P 12,500,000	5,000,000	8,500,000	26,000,000
Assuming net immigration of 616,000 Jews	£P 12,500,000	5,000,000	25,000,000	42,500,000
Assuming net immigration of 860,000 Jews	£P 12,500,000	5,000,000	31,500,000	49,000,000
Assuming net immigration of 1,125,000 Jews	£P 12,500,000	5,000,000	39,000,000	56,500,000

All values rounded to the nearest £P 500,000. Requirements for citrus based on a prewar Jewish cost of £P 75 per dunum for groves with superior installations. Requirements for "other export" crops based on prewar cost of £P 400 per worker. Requirements for intensive domestic-supply farm based on £P 625 per worker at prewar. Equipment of present Jewish mixed farms evaluated as sufficient for 9,730 intensively equipped workers for domestic supply.

TABLE 19: CAPITAL REQUIREMENTS FOR THE EXPANSION OF ARAB AGRICULTURE, APART FROM COSTS OF SOIL ACQUISITION, AMELIORATION OF LAND, HOUSING, AND GENERAL IRRIGATION WORKS OFF THE FARM

(In "Postwar" prices, equal to 150% of 1938 in £P or 125% in $)

Requirements for the			
Expansion of citrus	*Expansion of other export crops*	*Semi-intensive development of about 500,000 irrigated dunums*	*Total Capital Required*
£P 7,000,000	1,500,000	8,000,000	16,500,000

All values rounded to nearest £P 500,000. Citrus requirements based on prewar cost of £P 50 per dunum. Requirements for "other export" on same basis as Jewish. Semi-intensive development estimated to require about one-third as much capital per cultivated dunum as is required in intensive Jewish farm for domestic supply.

In the immediate prewar years, irrigable plain land in Palestine sold for about £P 7 to £P 15 per dunum (say $133 to $275 per acre, at 1937-39 exchange rates). The upper limit was the price only of the best situated, best quality, citrus land. A weighted average might have been about £P 10 per dunum (say $190 per acre). If we increase this price by 50 percent to bring it to our "postwar" level, it comes to £P 15 per dunum. If expansion is concentrated primarily in the irrigable plains, and on our maximum immigration assumption, Jews will find it necessary to buy 500,000 to 800,000 dunums of such land in addition to the land they now own. At our assumed price level, this will mean an expenditure of £P 7,500,000 to £P 12,000,000.

It will, however, be extremely difficult politically to reduce land prices to this level, in the face of a large-scale immigration. Only severe Government control will suffice to bring it about. The principle might perhaps be established that no rural land is to be sold at a price more above its prewar value than the increase in the cost-of-living index, but at such prices it may be very difficult to induce sales in sufficient volume for colonization purposes. One great lever to foster such sales exists, however, in the extension of irrigation. It might be stipulated, as a condition for receiving irrigation water from a general scheme, that no landowner receiving such water be allowed to retain ownership of land beyond a generous allowance for family use. Sales of the remaining land would then take place at controlled prices. This is an extremely difficult kind of land settlement to administer, but something of the kind is required if Jewish agricultural expansion is not to be blocked—or driven into uneconomic channels—by the need to buy land at fantastic prices. At the same time as land is made available, in this way, for Jewish settlement, Government credit should be extended to the Fellah to enable him to acquire a clean title to his own land. Under such circumstances, land reform might be achieved in an atmosphere of good feeling between the Jewish and Arab peoples.

It must not be thought that the purchase of land by Jews will, in itself, be sufficient to enable the Fellah to modernize his own farm. Most Jewish land purchases are from absentee landlords (including a large number resident outside of Palestine), not from Fellaheen. The Fellah will be able to use the substantial hoard of cash he accumulated during the war. For the rest, Government will have to help him to acquire new equipment as well as teach him how to use it. This is the responsibility of a Mandatory or Trustee in its relationships with a people "not yet able to stand by itself under the strenuous conditions of the modern world."

SUMMARY

1. Palestine is favorably situated to supply European markets not only with citrus fruits but also with other subtropical fruits and vegetables and with some temperate products at times when they are out-of-season in cooler climates. Palestine is also capable of producing a much higher percentage of her own food than she did in the 1930's. On the other hand, it seems unwise for her to attempt to achieve self-sufficiency in food by fostering inefficient production of crops better suited to more temperate climates or to countries which can better afford extensive cultures.

2. Agriculture should occupy a less important place in the total occupational structure of Palestine at the end of a decade of large-scale immigration and progressive economic growth than it held at the end of the 1930's.

Arab agricultural employment in 1939 is variously estimated up to 80 percent of the total number of Arabs gainfully employed. Despite great opportunities for intensification in Arab agriculture, there is a trend and need for urban employments to become steadily more important in the total Arab economy.

Jewish agricultural employment in 1939 accounted for about 19 percent of the total Jewish labor force. Assuming a net Jewish immigration of between 615,000 and 1,125,000 during the decade, there will be opportunity to employ between 12 and 15 percent of the total Jewish labor force permanently in agriculture, in well-equipped farms at a decent standard of living. A higher ratio of Jewish agricultural employment would mean either market opportunities that we have not foreseen or a lower standard of living than we have taken to be acceptable. It does not seem improbable that, particularly in years of large immigration, the standard of living may be lower than we have assumed and agricultural employment correspondingly higher.

3. The land resources of Palestine are adequate to support a great expansion of agricultural activity. Even at the end of the postwar decade, and on our maximum immigration assumption, substantial reserves of land will exist (both extensively and intensively) to be brought under cultivation later as skills improve and market conditions justify.

Palestine needs a thoroughgoing land reform. This land reform should involve formation of consolidated Fellah holdings. It should make it possible for many Fellaheen gradually to acquire clean title to their own land. It should provide facilities for Jews to buy agricultural land all over Palestine, at controlled prices, and with adequate protection of the interests of all cultivators.

4. The capital required to improve and expand Palestinian agriculture so as to achieve a sharp rise in the standard of living of the Arab Fellah and to accommodate the needs of between 615,000 and 1,125,000 Jewish immigrants would be between £P 49 million and £P 73 million ($196 million and $292 million). This figure assumes a price level 50 percent higher than 1938 in Palestinian pounds (or 25 percent higher in U. S. dollars).

About £P 16.5 million would be required for the expansion and intensification of Arab farming. Of this, half would be required for the improvement of Arab Fellah farming and half for Arab commercial farming for export.

Between £P 42.5 million and £P 56.5 million would be required for the expansion and intensification of Jewish farming (apart from land costs). Some £P 25 million to £P 39 million would be required for the expansion of "mixed" farming designed to supply domestic markets and about £P 17.5 million for farming for export. (The distinction between these two types of farms need not, however, be completely hard-and-fast. Some farm units will no doubt serve both markets.)

5. If Palestinian agriculture is to accomplish a large-scale intensification rapidly, the country needs greatly extended facilities for agricultural training. Jewish collective and large-scale commercial farms will serve, in part, as a training ground for the "green" Jewish agricultural labor. The work of these farms needs, however, to be supplemented by more agricultural schools.

The problem of training the Fellah for more intensive agriculture is even more difficult and delicate than that of training Jews. In view of the Fellah's illiteracy and his resistance to innovation, great results are not to be expected rapidly. Progress might be accelerated by international assistance in supplying agronomists acquainted with the problems of improving the agricultural methods of backward peoples.

CHAPTER 25

MANUFACTURES IN THE NEXT DECADE

PROBLEMS OF THE TRANSITION PERIOD

The appraisal of the potentialities of Palestine's manufactures in the next ten years is especially crucial in light of the preceding analysis of Jewish Palestine's agricultural prospects, indicating that in the event of large scale immigration the percentage of the population earning its livelihood from agricultural pursuits probably would not attain the prewar proportion. Thus one must look principally to manufactures if large-scale immigration is to be sustained. Our query accordingly is centered on the absorptive capacity of manufactures at the end of the next decade; i.e., on how many persons can be employed in Palestinian manufactures in 1954. The process of absorption is regarded as a secondary matter.

The transition from war to peace, however, must be in the forefront of this discussion, since the condition in which industry emerges from the present transition period will have an important bearing on the state of industry at the end of the decade.

The discussion of the wartime developments in Part III set forth the major difficulties that confront manufacturing industries and must be surmounted if the Palestinian economy is to be an expanding one. These difficulties may be summarized under three categories: high cost structure, low productivity, and uneconomic lines of production fostered by military orders and the virtual embargo on foreign competition.

The high cost structure that characterizes all sections of the Palestinian economy is perhaps foremost among the problems of the transition period. The causes of the inflation have been analyzed elsewhere. Here it is sufficient to indicate the seriousness of the problem by comparison with trends in Great Britain and the United States, for it is the manufacturers of these countries that will provide the postwar competition both in Palestine's domestic markets and in its export markets. It is little comfort to Palestinian manufacturers that the inflation has been better controlled in Palestine than in Lebanon, Syria, Iraq, and Iran, and at least as well controlled as in Egypt and Cyprus.

The gravity of the situation is readily apparent even when one assumes that in the United States and in Great Britain wholesale prices and wage rates will not decline during the transition period, and indeed may even rise slightly. In Palestine the cost-of-living index under most favorable circumstances probably will not be reduced below 150, despite the strong probabilities that the price of imported raw materials will be sharply reduced and the price of foodstuffs (which comprise much the largest part of the wholesale price index) will also decline precipitously. With a proportionate reduction in the cost-of-living allowance, but with basic wage rates remaining constant, the index of earnings per man-day will stand at 200-210; this compares with an index of about 150 for hourly straight-time earnings in the United States and Great Britain (where straight-time rates are not supplemented by cost-of-living allowances). The reduction in Palestine's basic wage rates is, therefore, imperative. This is always difficult to achieve, however, especially when the workers are well organized as they are in Palestine. On the other hand, additions to the labor force through immigration will exert pressure in the required direction.

There are no comprehensive statistical data on profit rates in manufacturing enterprises, but the fragmentary materials that are available suggest that the inflation of the profit rate has been at least equal to the rise in daily earnings. Accordingly, the subsequent deflation of profits must be equally severe if the economy is to be a developing one. The resumption of competition can be counted on to provide the corrective.

The importance of reducing the real rate of return to labor and capital is reinforced by the realization that labor productivity is low relative to the levels achieved in Great Britain and the United States. That is, not only have the factors of production become relatively more costly than in the great western industrial countries, but also relatively less efficient.

The latter situation arises from three major conditions. One of these conditions, imposed by wartime shortages, has been the unavailability of new machines and an inadequate supply of parts for the maintenance of old machinery. This shortage was superimposed upon a condition of isolation from the newest developments in technology, due to difficulties of communication and travel. The shortage of building materials and manpower has made it virtually impossible for rapidly expanding firms to acquire larger buildings. The consequent crowding of machinery and work space, and improper ventilation, lighting, and sanitary facilities, all operated to reduce efficiency. A contributing factor was the necessity of adjusting to the use of substitute materials which were frequently changing in character.

TABLE 20: COMPARISON OF INDEXES OF PRICES AND WAGES IN PALESTINE, THE UNITED STATES, AND THE UNITED KINGDOM

Country and year	*Cost-of-living index*	*Wholesale price index*	*Raw materials and articles mainly unmanufactured (index of import price)*	*Index of total earnings per man-day in manufacturing*	*Index of basic earnings per man-day in manufacturing*
Palestine					
1939	100 [a]	100 [b]	100 [c]	100 [d]	100 [e]
1943	233	302	288	268	
1944	242	319	306	307	145
U. S. A. [f]					
1939	100	100		100	100
1943	124	134		181	144
1944	126	135		193	152
U. K. [g]					
1939	100	100		100	100
1943	125	158		176	136
1944	126	161		180	143

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[a] *General Bulletin*, Feb. 1945 for all years.

[b] Figure for 1939 from Statistical Abstract, 1943; other years from *General Bulletin*, Feb. 1945.

[c] *General Bulletin*, Feb. 1945 for indexes for 1939 and 1943; index for 1944 computed by us from foreign trade statistics in the Supplement to the *General Bulletin*, March 1945.

[d] Figure for 1939 from Statistical Abstract, 1943; other figures from *General Bulletin*, July and August 1944 and Feb. 1945. Average paid to Arab and Jewish workers computed with a weight of 6 for wages paid Jewish workers based on *Government Census of Manufacturing* for 1943. Index for 1944 is based on figures for the first 9 months.

[e] These figures relate only to Jewish manufactures. The figure for 1939 is taken from the *Statistical Yearbook*, 1943, pp. 4 and 5. The figure for 1944 relates to July and is based on a special tabulation of the Government's sample of Jewish-owned manufactures reporting monthly. The tabulation is comprised of those firms that reported both total wages, cost-of-living allowances, and mandays worked.

[f] Figures adapted from *Monthly Labor Review*, March 1945, and other issues. Earnings in manufactures refer to a weekly period and relate to January of each year. Basic wage rates represent average straight-time hourly earnings in manufactures.

[g] Figures adapted from London and Cambridge Economic Service, Jan. 1945, p. 13, with exception of index of weekly earnings in 1943 which is taken from the Oct. 1944 issue, p. 77. Index of total earnings covers all industries. Presumably if its coverage had been restricted to manufactures the rise would be considerably greater. The wage rate index measures the effect of changes in time rates for a normal week and in piece rates for selected occupations in 20 industries.

The onus for the other two principal sources of low productivity cannot be attributed to external factors. One of these is faulty management. The ease of profit-making during wartime tended to make even expert and experienced managers lax and enabled those inexpert and inexperienced in plant layout, flow of materials, cost accounting, etc., to prosper. The other is a low standard of labor effort. Most of the Palestinian manufacturers with European experience in identical branches of manufactures agree that the Jewish worker compares very favorably with his European counterpart in aptitude. But nearly as many also agree that the Jewish worker often is not as productive as the workers in Europe only because the Jewish worker is unwilling to exert himself to the full. During the war, the Jewish factory worker and his organization took the position that more intensive efforts would only enhance already swollen profits. For this reason the labor organization has been unwilling, except in some textile mills, to allow its members to work on a piece-rate basis or on any other form of individual-incentive wage payment. With full employment removing the threat of dismissal, the situation could lead only to a lowering of productivity.

The third major problem of the transition period, though of less importance than the problems of cost and productivity, is the existence of lines of production that were economic only in wartime. As noted elsewhere, Palestine's industry produced very few ordnance items; most of the articles were quartermaster's supplies. Consequently, the problem of technical conversion of plants from wartime production is a negligible one. Rather the problem exists either because military orders constituted most of the market for which there does not appear to be a substitute market of equal magnitude, or because the virtual embargo on certain types of imports reserved the local market exclusively for local manufacturers. The production of jams and marmalades and of canvas tents illustrate the former; while the production of semi-automatic looms, automobile spare parts, and calcium carbide exemplify the latter. Either the employers producing these articles must find substitute products that will be competitive, or their workers must shift to other enterprises.

NUMBER OF ORDERS FOR MILITARY STORES EXCLUSIVE OF FOODSTUFFS AND NAAFI * STORES

	1942		*1943*		*1944*	
	First half	*Second half*	*First half*	*Second half*	*First half*	*Second half*
Heavy industries	31	56	65	39	29	22
Light industries	27	25	39	44	47	44
TOTAL	58	81	104	83	76	66

Source: Unpublished information of the War Supply Board. *NAAFI is the British equivalent of the post exchange stores of the U. S. armed services.

The potential magnitude of this type of dislocation cannot be assessed exactly. It is possible, however, to point to several factors that should have an ameliorative effect. One such consideration is that the withdrawal of military orders has been a gradual process. A few rough measures make this clear.

Not only did the number of military orders decline after the first half of 1943, but the size of the individual orders, on the whole, was reduced. Expenditures for military stores, including foodstuffs, suggest much the same process.

MILITARY EXPENDITURES
(*Thousands of £ P*)

1942	8,100
1943	11,500
1944	10,500
1945	6,500 (estimated)

Source: Unpublished Information of War Supply Board.

The decline in expenditures between 1943 and 1944 was less pronounced than the decline in orders because expenditures reflect the rate of completion of orders as well as the placing of new orders. Moreover, if a semiannual series were available, it would probably show a sharp reduction in the second half of 1944 compared with the first half. This gradual tapering off of military orders has made possible an orderly readjustment.

It enabled the Government, for example, to organize a large part of the textile industry for the production of utility goods and the metal industry for the production of a large variety of household articles. The industrialists themselves, moreover, were able to utilize the breathing spell to investigate alternative possibilities that can stand the tests of postwar competition. The manufacturers of marmalades and jams, for instance, have been able during this interim to investigate more effective techniques for producing citrus concentrates and by-products as replacements for marmalades and jams.

With respect to the more important problem of the transition, the reappearance of competition from abroad, Palestine will also benefit by favorable timing. During the war, the large increases in productive capacity among the Western powers took place in foodstuffs, raw and semi-processed materials and machine tools rather than in final consumers goods. This should mean that world trade will be resumed first in low-priced raw and semi-processed materials, and machine tools, somewhat later in cereals, meats, fruits and vegetables, and only still later in processed consumers goods. The tremendous backlog of demand for the latter in the United States, Great Britain, and other large producing countries precludes their entering international trade at an early date. On the other hand, the supply position of materials will be such that even after satisfying the material requirements for the deferred demand for consumers goods there still will be sufficient supplies for shipment in international channels. Whether the cereal supply will be equally easy depends chiefly on the speed with which the devastated areas can be restored to production.

If our analysis is correct, Palestine manufacturers will not be faced immediately with keen foreign competition in their domestic and export markets, but only after a lapse of several years. In the meantime the availability of cheap, or at least much cheaper, raw and semiprocessed materials together with cheaper foodstuffs (which in turn leads to lower wage costs) should enable the Palestinian manufacturers to reduce appreciably their inflated cost structure. These few years of grace, before the full force of foreign competition is felt, provide Palestine with an opportunity for an orderly deflation. Whether the opportunity can be exploited depends in large part on the authorities understanding the necessity for restraining the latent building boom.

There are still other favorable factors that should come into play during the transitional period. Not least among these is the very great energy and drive that typically characterize Jewish entrepreneurs in Palestine; it reflects their strong will to succeed, combined with resourcefulness. This spirit has been encouraged by their rather considerable achievements in production during the war years. While these achievements have given them self-assurance, they have not resulted in widespread complacency. There is a very keen interest, for example, in purchasing new machinery and in studying newly developed techniques. A relatively large number are actively interested in traveling to Great Britain and the United States for the purpose of acquiring equipment and knowledge.

Moreover, many manufacturers have the financial resources for implementing their interest. Generally speaking, profits have been sufficiently ample to allow for the accumulation of reserves for replacement and expansion of plant and equipment. In some cases, these reserves may be more nominal than real in that they consist of pounds sterling frozen in London. If the restrictions on the use of these balances are not too severe, the consequent restraint upon entrepreneurial effort may even be helpful, in that it may allow time for more sober second thoughts and serve to block rash actions such as the purchase of second-hand machinery which could not be amortized before it became obsolete.

On the matter of improvement in productivity, there are also some grounds for moderate optimism. Obviously the purchase of new equipment will make an important contribution towards increasing productivity as will information on new techniques. The construction of new plants, for which architects' plans have already been drawn in many cases, will greatly facilitate a more efficient machinery layout and flow of materials, and result in more adequate lighting, ventilation, and sanitary facilities, the absence of which has been a drag on the attainment of efficient operations.

Also helpful is the awareness on the part of responsible persons in Jewish industry and labor organizations and in the Jewish community at large that the workers must be given better technical training. To this end they have already formulated plans leading to a formalized apprentice system and the extension of vocational and technical schools and continuation courses. Thought has been given to an arrangement whereby a carefully selected group of workers will be enabled to go to the United States or Great Britain for study and work experience.

The attitude of the workers and their leaders will be of crucial importance. And on this point one may count on the sobering influence of events. The return of some 20,000 Palestinian soldiers, the continued immigration of adult Jewish refugees, the drastic reduction of military orders, the loss of consumers' markets resulting from the substantial demobilization of British military personnel resident in the country during the war, and the repatriation from Palestine of non-Jewish refugees (Greeks and Poles)—all are bound to create some unemployment. The reappearance of concern for job security may well serve to quicken the pace of work. Simultaneously, a drastic deflation of the profit rate will remove one of the rationalizations for the slow-down. In such an atmosphere it may be possible to invoke Zionist idealism, which has as its fundamental postulate the economic absorption of as many Jews as possible. One should be able to demonstrate, under the above conditions, that the rate of absorption will be largely dependent on the rate of productivity. A test of good faith may well be labor's willingness to accept a controlled form of incentive wage payments, which supplements idealism with self-interest and which is probably indispensable for achieving the requisite increase in productivity.

The manufacturers and workers are not the only ones who learned how to do things during the war years. Government officials also learned much, particularly that the Government can play a constructive role in developing industry. This newly acquired understanding can also be a helpful factor in easing the difficulties of the transition period.

PRODUCTION FOR WORLD MARKETS

The field of production in which Palestine's manufacturing efficiency is put to the severest test is that of industries whose markets extend beyond local and regional boundaries, industries with overseas markets. A few such industries developed prior to hostilities, several came into existence during the war years and additional ones are likely to arise in the postwar decade. In the first category the most important has been the industry based on the utilization of the Dead Sea salts.

Potash and Bromine

The development of the potash industry is indicated by exports of crude potash salts from 1935 through the war years:

	Metric tons		*Metric tons*
1935	18,124	1938	47,496
1936	19,793	1939	63,527
1937	29,110	1943	103,121 (estimated)

Source: *Statistical Abstract,* 1939 and 1942 and Supplement to *General Bulletin,* March 1944.

Thus its output by 1943 was more than double its 1938 production.

With the outbreak of the war the Palestinian Government waived its right, under the Dead Sea Concession, of pre-emption of the potash output in favor of an agreement whereby the entire output was sold to the United Kingdom at a mutually satisfactory price. Except for relatively small shipments to Australia, the United Kingdom remained throughout the war Palestine's sole customer.

With the return of international trade, what are the prospects for Palestine's potash industry? To evaluate these prospects, it is helpful to take note of Palestine's prewar position, the prewar world supply of potash and the changes that occurred during the war years. Table 21 sets forth the potash production by countries in 1937 and 1938. The largest producers were Germany, France, and the United States. The former two were important exporters, while the United States produced less than half of its domestic consumption, importing the balance chiefly from Germany. Other large importing countries buying German-French potash were the Low Countries, Great Britain, Scandinavia and Japan. Except for a brief excursion in export markets in the early thirties, Russia's output has been consumed domestically. Due to the Civil War, Spanish deposits were not worked in the years covered. Palestine's 1938 output, measured in K_2O, represented only 1 percent of world production. Even with the wartime doubling of output, Palestine remains a relatively unimportant producer.

Palestine's prewar potash markets were scattered, and for the most part they did not coincide with her natural transportation advantage. Markets in the British Empire accounted for about 45 percent of the total, with one-quarter of all exports disposed of in the United Kingdom. Nearly one-third of all sales were made in the Far East and South Africa, areas in which Palestine should have a transportation advantage over other producing centers. Consumers in the United States absorbed as much as 24 percent of Palestine's exports, while 15 percent were shipped to the Low Countries. These were the markets and sales achieved by the Palestine Potash Company under its agreement with the German-French Potash Cartel.

TABLE 21: WORLD PRODUCTION OF POTASH, MINERALS AND EQUIVALENT K_2O, BY COUNTRIES, 1937-38

(*In thousands of metric tons*)

	1937		*1938*	
Country and mineral *	*Output*	*Equivalent K_2O*	*Output*	*Equivalent K_2O*
United States, potassium salts	441	258	485	288
France (Alsace) crude potash salts	2,884	490	3,375	582
Germany, crude potash salts	14,460	1,968	16,442	1,861
Italy, alunite	3,500	†	2,778	†
Poland, crude potash salts	621	100	567	108
U.S.S.R., crude potash salts	2,400	266		122 (est.)
Chosen, alunite	149			
India (British) nitrate of potash	9	4	8	4
Palestine, crude potash salts	36	18	58	29

Source: *Mineral Yearbook*, 1941, Bureau of Mines, U.S. Dept. of the Interior, p. 1461.
* China and Australia produced less than 1,000 metric tons.
† Less than 1,000 metric tons.

The cost of production per ton in 1938, at the plant on the northern end of the Dead Sea, was £P 1.487, while transportation to Haifa, royalties, etc., amounted to £P 1.646, making a total cost, f.o.b. Haifa, of £P 3.133 per ton. Costs at the southern plant, when full operation was achieved, were expected to be 150 mils higher per ton due to the added cost of the barge haul. Production costs were thought to be lower than those based on mining operations. Costs during wartime were undoubtedly much higher. In addition to the payment of cost-of-living allowances to the workers, rail freight rates from Jerusalem to Haifa were increased by 50 percent.

The actual average price per ton, f.o.b. Haifa, as derived from the export statistics, has been as follows:

Year	*Average price per metric ton f.o.b. Haifa (£ P and mils)*
1935	4.427
1936	6.712
1937	6.000
1938	6.000
1939	6.000
1943	7.506
1944	9.000

There would appear to have been an ample margin in all years after 1935, although the exact costs of production during wartime are not known.

Little specific information is available on wartime production of potash in Germany or in France and Poland during the period in which they were under Nazi control. Cut off from important overseas markets such as Great Britain, United States and Japan, German-controlled production most probably was curtailed. Certainly manpower shortages also served to restrict output to domestic needs. Information to date indicates that both the French and German potash mines have suffered only from neglect and could be restored to production within a year.

Whether Germany's potash production will be appropriated by the Allied and occupied nations as reparations in kind is still a moot question. Any such move, however, very probably would be resisted by British financial interests, to which the German potash industry has been mortgaged. Appropriation may render servicing of the debt difficult. In the event of appropriation, Palestine might lose its market in the United Kingdom, which in prewar years purchased one-quarter of Palestine's output and in war years virtually the entire production.

The resumption of production in Spain after 1939 contributes another factor that was absent from the immediate prewar period. *The Minerals Yearbook* for 1941 reported that "it is believed that the three operating companies are producing refined salts at the rate of 100,000 to 120,000 tons of K_2O per year." This level of production seems reasonable since according to the U.S. Department of Commerce, Spain exported 75,000 metric tons in 1942 and 40,000 in the first 6 months of 1943. In the former year some 28,000 tons were shipped to the United Kingdom and France, and in the following 6 months as much as 34,000 tons were exported to the United Kingdom. Thus in the postwar decade Palestine will have another competitor for the British market—a competitor, moreover, that will have a transportation advantage.

There is no information on recent developments of Russian potash production. However, it is unlikely that Russia, in view of its own needs and its transportation disadvantage, will be an important exporter unless, of course, the decision is made to disregard economic costs.

Of all the large producers only the United States expanded production during the war years, and from the viewpoint of the Palestine industry this development constitutes a serious obstacle to its expansion. By 1943 United States production of crude potassium salts amounted to 1,429,000 metric tons, nearly triple the 1938 production. In terms of equivalent K_2O the expansion was somewhat smaller, about 157 percent. This rate of increase has made the United States self-sufficient with respect to its potash needs. Self-sufficiency was accomplished, moreover, without any rise in price. The industry never sought relief from the 1937 prices set by the OPA, and profits have not been so large as to occasion a price reduction. Unit costs apparently have been no higher than in prewar years.

Prewar production in the United States, however, was handicapped by a transportation disadvantage with respect to its main markets. It was this disadvantage that made the United States potash industry welcome the offer of the German-French Potash Cartel to maintain prices at a level that would compensate for the transportation handicap in exchange for a share of the American market.

The new productive capacity suffers from the same disadvantage since it is in the same or adjoining locations as the prewar capacity. Although the policy of the United States on international cartels in the postwar world is far from definitive at the present moment, it is quite certain nevertheless that the United Nations will not permit the reemergence of an an international cartel under German domination. Moreover, if the American industry should need protection in order to maintain capacity operations, it probably would be forthcoming. On the other hand, protection may not be needed even in the absence of a cartel agreement, for the industry operates under conditions of oligopoly which tend to set prices without collusion at a level that will maintain high-cost producers.

If these circumstances should result in the exclusion of potash imports by the United States, it would mean more to Palestine than losing a market that absorbed one-quarter of its prewar production. It would mean that an important fraction of prewar potash production in France and Germany now becomes redundant, and the competition in the remaining markets may thereby become keener.

It is more probable, however, that there will be imports of potash by the United States. For it is more economical for consumers in the eastern United States to import potash from Europe than to obtain shipments from California, thus freeing the California production for shipment to Pacific markets. In certain of these markets, particularly Japan, the California production would be competitive with Palestine's production. For the "natural" markets for Palestine's potash are the agricultural lands of the eastern Mediterranean, the Middle East, East and South Africa, the South Pacific, and the Far East.

In these regions, however, with the exception of Australia, New Zealand, and Japan, agricultural techniques are backward, which means that their consumption of potash is more potential than actual. Thus the Eastern Mediterranean countries (Yugoslavia, Bulgaria, Greece and Egypt) in 1937 imported only 12,000 metric tons of potash fertilizers, South Africa 8,000, all of Asia excluding Japan about 35,000, and Australia and New Zealand about 40,000. Wartime pressures have undoubtedly made for some advancement in agricultural practices in these areas, and continued improvement will probably occur, but the pace is bound to be a slow one in the first postwar decade. Although the aggregate consumption in these countries will be relatively small, Palestine, it must be remembered, is a relatively small producer. Their prewar consumption amounting to 95,000 tons is only slightly less than Palestine's wartime exports.

Japan, on the other hand, has been a large importer, chiefly from Germany, of potash fertilizers, some 251,000 tons in 1937 and 165,000 in 1938. If Palestine's potash production is to expand appreciably beyond its wartime level, it must be in position to acquire a substantial part of the Japanese market in competition with the California potash.

The f.o.b. price of potash at a California port was about $29 per ton in 1944, compared with $36 per ton at Haifa. This suggests the magnitude of the readjustments that must be made by the Palestinian industry.

The realization of these difficulties has prompted the Palestine Potash Company to memorialize its Government, as operator of the country's railroads and ports, to eliminate the rail freight rise of 50 percent and to provide sufficient storage accommodation in the Haifa port area along with facilities for bulk loading. The latter improvements would eliminate the costs of double handling, bags and packing.

Also under investigation are the possibilities of alternative transportation methods and routes from the Dead Sea to the Haifa port; e.g., the use of trailer trucks over the level roads of the Jordan valley and the Emek Esdraelon instead of the present method of trucking over a steep, mountainous road to Jerusalem and transfer to railroad freight cars. For shipments to the Far East the possibilities of the Akaba port are already receiving preliminary attention. Recognition has also been given to the necessity for greater efficiency in production, particularly the mechanization of internal plant transportation. Larger scale operations, particularly at the southern plant, would result in economies. Together with the expected decline in the cost of living and hence of wages, Palestine's potash very probably will again be restored to a competitive position, particularly with respect to the Far East markets.

If the use of German potash as reparations in kind is barred, Great Britain should continue as an important outlet for Palestine's potash. There is the advantage of long-established trade connections and the British desire to support the only source of potash production in the British Empire. Moreover, if Great Britain adheres to a policy of producing more of its foodstuffs than in prewar years, its consumption of potash should increase compared with prewar requirements.

Another favorable factor is the very real possibility of producing potassium sulphate now that the local manufacture of sulphuric acid may be regarded as a foregone conclusion. As a fertilizer, potassium sulphate is preferred to potash salts for cotton and citrus crops. Hence it brings a higher price and results in a larger "value added" by Palestinian manufactures and more employment.

For all these reasons it would appear that not only will the wartime gains be retained, but further expansion will take place by the end of the decade. Enlarged production facilities can be arranged easily at the plant on the southern shores of the Dead Sea.

Bromine and bromine salts have been the other major products extracted from the Dead Sea brines, as a byproduct of the potash production. Prewar level of output was about 550 tons. Figures on wartime production have not been released, but there are indications that output was at least doubled, for use in Great Britain in the production of high octane gasoline. With the cessation of aerial warfare, it is very doubtful whether the demand for high octane gasoline, and hence of bromine, will be maintained. Equally questionable is the complete replacement of this outlet by use in fire extinguishers, insecticides, and pharmaceutical products. Research in this field, however, continues and new uses may be discovered. At the present time it seems unwise to count on any appreciable expansion.

Magnesium Metal

The Dead Sea brines, it is hoped, will give rise to still another industry, the manufacture of magnesium metal. The basis of the hope has been the very large quantity as well as the unusually high concentration of magnesium salts in the Dead Sea waters. The former has been estimated as having a magnesium content of 5,900 million metric tons, while its concentration in the Dead Sea waters is eight to nine times higher than in ocean water.

Shortly after Palestine Potash, Ltd. began commercial operations based on the extraction of potash salts, it seriously entertained the possibility of producing magnesium metal. The managing director of the company, however, in his report to the Board of Directors in 1935, set forth his reasons for believing that the project was not commercially feasible at that time. His recommendation was grounded on the fact that electricity required for the electrolysis of the magnesium chloride, which accounts for about 15 percent of the value of the product, could not be generated at less than 0.6 cent compared with a rate in Germany of about one-half that of Palestine. This handicap of a relatively expensive power rate would be mitigated only partly by the cheapness of the magnesium chloride which is derived as a by-product of the potash operations.

In the directors' eyes, moreover, the marketing outlook was equally unfavorable. Magnesium metal at that time had highly restricted uses. Because of its lightness its chief use was in the manufacture of airplanes, and accordingly purchases were virtually limited to governments concerned with rearmament.

With the onset of World War II, the short supply of magnesium metal in the United Nations was thought to provide an opportunity for developing the industry in Palestine. In 1939 estimated world production of magnesium amounted to only 30,900 metric tons and more than half—16,500—originated in Germany. Great Britain in that year produced only 4,831 tons, the United States 3,039, France 2,500, and Soviet Russia 1,000 tons. Two years later world production had increased by one-and-a-half-fold over 1939, amounting to 77,600 metric tons. Axis countries controlled 60 percent of the total output. Production in the United States in that year reached 15,000 tons and in the United Kingdom 12,000 tons. The latter's production was based on domestic dolomite, sea water, and magnesite from Greece and from West and South Africa.

The major expansion in the industry took place after 1941, and much the largest part of the expansion was reserved for the United States. In 1939 Dow Chemical Co. was the sole producer of magnesium metal in the United States, its output amounting to about 3,000 metric tons. By 1943 there were a dozen major manufacturers producing 166,584 metric tons. Rated annual capacity in the second quarter of 1944 equalled 272,000 metric tons. This phenomenal rate of expansion involved an investment of approximately a half billion dollars, almost all Government financed, in the production of the metal, and an additional 15 million dollars in the expansion of fabricating facilities.

World production of magnesium in 1943 has been estimated by the United States Bureau of Mines at 269,000 metric tons. On this basis, production in Axis controlled countries and in other United Nations must have remained at nearly the level of the 1941 output.

Since magnesium metal had become a prime necessity in the manufacture of airplanes and incendiary bombs, the cost of production was no longer an important consideration. Under this condition Palestinian interests, early in the war, called to the attention of supply authorities in Great Britain and the United States the possibility of utilizing the magnesium salts of the Dead Sea. Sufficient electricity to manufacture 2,000 tons of magnesium could have been made available in Haifa. The limited production, inability to ship equipment and to furnish expert technical personnel, and the relative ease of achieving a tremendous expansion in the United States, all contributed to the rejection of the proposition.

Despite all these developments, the hope persists that with the construction of a major irrigation and water power project ensuring cheap electricity, Palestine can develop its own magnesium metal industry. This hope, too, there is reason to believe, will go unfulfilled at least in the first postwar decade. The proposition is suspect on several counts. In the first place, according to materials currently on hand, it is doubtful whether any of the power projects now contemplated would provide power rates sufficiently cheap to sustain electro-chemical or electro-metallurgical industries.*

Wartime experience serves to confirm the opinion that production based on the electrolysis of brine or sea water results in the lowest cost; in the United States more than one-third of the peak production was based on brine or sea water. The advantage that would accrue to Palestine from the use of more concentrated brine of the Dead Sea is, however, negligible since it affects only the pumping expense, which constitutes a very small fraction of total costs. On the other hand, Palestine's capital costs are bound to be relatively high compared with those of private owners in the

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* For the evidence on this point see Chapter 23.

United States. For many of these plants will be regarded by the United States Government as surplus property and will be disposed of probably at a small fraction of original investment outlays.

The more serious difficulties are encountered on the demand side. In prewar years there were few civilian uses for magnesium. Certainly, there was no opportunity to promote such uses during the war years. The 1943 consumption in the United States of magnesium-base alloy structural products is probably typical of magnesium consumption in all countries.

PERCENTAGE DISTRIBUTION OF UNITED STATES CONSUMPTION OF MAGNESIUM-BASE ALLOY STRUCTURAL PRODUCTS, BY USES, 1943

Type of use	*Percent of total tonnage*
Aircraft	
Engine	32.0
Frame	3.7
Wheel	11.3
Accessories	2.8
Incendiary bomb casings	49.7
Other industries	.5
TOTAL	100.0

Source: Mineral Market Reports No. MMS 1213, *op. cit.*

With the drastic shrinkage of aircraft production to peacetime needs, and with the cessation of incendiary bomb manufacture, what uses will there be for the current world production that is eight to nine times larger than the 1939 output? The experts cannot provide an answer that calls for using even that part of output which may be considered as low-cost production. In such circumstances it would certainly be foolhardy to develop new capacity. The problem of redundant capacity may be underscored by the fact that in February 1945, while the war was raging in both the European and Pacific theatres, only 15 percent of U.S. installed capacity was in operation. The same problem of excess capacity, though in a less acute form, will confront the industry in Great Britain, Germany, France, Norway and Italy.

It is quite probable that Russia's production has not been expanded beyond its 1941 output of 4,000 metric tons. But, having extensive deposits of magnesite and abundant water power, Russia would do better to rely upon its own resources to meet any unfilled demands than to draw upon Palestinian resources.

Potential uses of magnesium in peacetime are no doubt considerable. It has a number of superior qualities compared with its chief competitor, aluminum, such as 25 percent less weight, freedom from gas absorption, high fatigue resistance, and superior machining qualities. Especially promising is the use of magnesium in moving parts of baby carriages, scooters, in textile machinery as flying spools and warp beams, in motorcycles, electric switches, containers, farm machinery, vacuum cleaners, roller skates, industrial filters, cash registers, scales and typewriters.

It seems quite clear that at the moment the industry does not possess the requisite "know-how" to use in peacetime production any large fraction of its greatly expanded low-cost production now available. Moreover, now that the magnesium industry has been divorced from the aluminum industry, at least in the United States, aluminum probably will become a much more aggressive competitor. The present price differential of 6 cents per pound in aluminum's favor very likely will be widened when the vast quantities of scrap aluminum derived from airplanes and other ordnance come on to the market.

One other consideration should be emphasized. The production of magnesium ingots contributes little "value added" to the national income. This is another way of saying that the industry provides little employment. Thus, the Dow Chemical Company plant at Freeport, Texas, utilizing sea water, employed 2,000 persons for an annual production of 16,333 metric tons. On the basis of the same employed productivity, a plant producing 2,000 metric tons would employ only about 250 persons.

Much more employment per unit of magnesium is created by the further fabrication of magnesium ingots. The deficiency in technical know-how constitutes the present bottleneck. Very possibly, Palestine's metal-working industry can share in any extension of this knowledge and perhaps even make some contributions. But such efforts need not be based on the domestic production of ingots, at least not in the first postwar decade.

In our view then, it is an illusion to entertain the hope that Palestine's absorptive capacity in the first postwar decade will be enhanced by the establishment of a magnesium metal industry. The reasons underlying this view include the following facts which we have attempted to establish: A large fraction of world capacity is now redundant as a result of the return of peace; under present circumstances, Palestine could not produce magnesium metal cheaply, probably could not do so even after the completion of a major water and power project; and finally, even if the industry could be developed in Palestine it would provide relatively little employment since it is a labor-extensive industry.

These strictures, of course, would not apply to the extraction of magnesia salts used chiefly in the pharmaceutical industry. Any such developments, however, can be of only very minor significance in terms of creating job opportunities.

In wartime, industry based on the Dead Sea brines gave factory employment on the average to some 2,000 persons, half of whom were Jewish. In our view, the degree of expansion to be anticipated by the end of the postwar decade would probably involve employment opportunities for about 3,000.

Artificial Teeth

Another prewar industry with international markets is the manufacture of artificial teeth. A highly efficient management, utilizing a patented design and feldspar imported from Canada, marketed its product in all parts of Europe, Australia, and Canada. In 1937 exports amounted to nearly £P 35,000, with two-thirds disposed of in Europe. About half of the European sales were made in central and southeastern countries of Austria, Czechoslovakia, Poland, Roumania, and Yugoslavia. The Palestine company established a plant in Cyprus in order to qualify for empire preference in the British market. With the outbreak of war and its spread to all of Europe, the European markets were lost. These were more than replaced by the development of markets in South America, Asia and Africa. Exports in 1944 nearly equalled £P 100,000.

Other tests of the managements' enterprise were also successfully met. For example, the materials formerly used for artificial gums were not available during the last years of the war. Plastic materials were substituted so successfully that they replace the old materials. This product too is sold over a wide area. The same company also carried out promising experimental efforts in designing and manufacturing specialized electrical equipment for medical purposes. The latter provides a clue for possible postwar developments. The company already possesses a well-organized international sales organization dealing with dental and medical supply firms. This organization could be used to supply other items that usually comprise the inventories of these supply establishments. The cost of materials in medical instruments, all of which must be imported, is not an important constituent in total costs. Skills and technical knowledge are vastly more important, and the nucleus already exists in Palestine.

Postwar prospects for the manufacture of artificial teeth are also bright. There seems to be no good reason why the prewar European market cannot be regained while the company maintains its present markets in other continents. If Germany, which had been Europe's chief supplier of artificial teeth, is unable or is not permitted to reestablish this industry, Palestine could enlarge its prewar European market. If Great Britain, moreover, should include Palestinian products within its system of Imperial Preference, the one hundred jobs now provided by this industry in Cyprus could be transferred to Palestine. For a variety of reasons then, this industry, which now employs about 200 persons, may well double its employment by the end of the postwar decade.

Gem Diamonds

The cutting and polishing of diamonds, Palestine's largest "war baby," is also its largest industry based on overseas markets. Although a few such shops had been established prior to 1939—the Government Census of Manufactures in 1931 reported 59 persons employed in four shops—the industry did not take root until the Low Countries had been occupied by Germany. Even by September 1940 only some 200 persons were employed in the Palestinian industry. Taking root under protective circumstances, it was not long before the industry flourished. Within 3 years, by the summer of 1943, peak operations were reached by 33 establishments, requiring a labor force of about 3,500 persons. Exports increased from £P 25,000 in 1940 to £P 950,000 in 1942, and to an estimated £P 3,235,000 in 1944. In 1943 investment was estimated at £P 1,150,000, of which about £P 900,000 consisted of inventories of raw and polished diamonds. Prior to 1944 about 90 percent or more of the industry's output was marketed in the United States, with most of the remainder exported in about equal amounts to Canada and India. The small gem diamonds—the so-called "8 cuts," 40 to 300 or more stones to the carat made from rough diamonds known as "sand" and "smallest"—have comprised about three-fourths of Palestine's production. This cheaper type can be produced with the minimum of skills. "Melees," 5 to 40 stones per carat, have constituted the remaining 25 percent of production. From the point of view of employment, the "8 cuts" have an additional advantage: one carat of "8 cuts" requires 2½ times more labor than one carat of melees.

By the last quarter of 1943 the expansion of the industry was brought to a halt. Thus its postwar prospects claimed attention at an early date. To appraise these prospects, it is necessary to gain perspective by reviewing the prewar world organization of the industry and the changes wrought by the war.

In the 1930's there were only three diamond centers of any importance: Belgium, the Netherlands and Germany. The approximate numbers (in thousands) engaged in the cutting trade in each of these centers has been estimated as shown on page 507.

Ever since 1909, Antwerp, Belgium, has been the leading diamond cutting center. Germany entered the field only recently when

Belgian employers realized that Germans could be employed even more cheaply than the Belgian workers. The industry in Germany, making a quality product, developed rapidly until the recession of 1938. Like Belgium, Germany's industry specialized in the preparation of very small gems, 8 cuts, while the Netherlands worked on larger stones.

EMPLOYMENT IN DIAMOND CUTTING
(in thousands)

Year	*Belgium*	*Netherlands*	*Germany*
1930	22.5	5.8	2.5
1931	22.5	6.2	2.8
1932	25.0	6.1	3.0
1933	23.5	6.2	4.0
1934	23.0	5.0	4.0
1935	22.5	5.0	5.2
1936	20.0	4.5	6.0
1937	20.0	4.5	6.0
1938	19.0	4.0	2.8

Source: *Minerals Yearbook*, 1939, p. 1390.

The history of the industry's development has been summarily described in the *Minerals Yearbook*, 1938, as "once a home industry, taught by father to son, it is now carried on in large factories. Started as a family trade, it has become a big business. Sixty-five years ago, the prince of artisans, the diamond cutter today (1938-39), due to the unjustified growth of his craft, receives an indifferent and desultory wage." This should not be taken to mean that the home industry as a form of organization was no longer used in the industry. Shortly before World War II, Antwerp's position was being undermined by the spread of the industry to the Belgian countryside and adjacent areas in Germany, where it was carried on as a home industry operating on a commission basis.

About 80 percent of all diamond gems were marketed in the United States, and as Table 22 shows, six-sevenths of total imports in terms of caratage and three-fourths in terms of value in 1939 were the small cuts. Of the latter, 85 percent originated in Belgium and 13 percent in the Netherlands. No other country provided as much as one percent of the total.

India has constituted the second largest retail market. In 1938, the immediate prewar peak, imports of cut but unset diamonds amounted to 3 million dollars. Purchases are made chiefly by the princely classes and have been restricted mainly to the larger, more expensive stones. Belgium has also supplied 85 percent of India's imports, with 6 percent originating in the Straits Settlements and an equal amount in the Netherlands.

The world supply of raw diamonds has been under the monopolistic control of the Diamond Corporation located in London. In most years this company manages to acquire about 90 to 95 percent of all the diamonds mined.

The war's impact upon the industry resulted in the destruction of the established cutting centers in the Low Countries and Germany, cut off as they were both from the supply of rough diamonds and the major markets. About 90 percent of all cuttings were performed in these three centers. The mining and distribution of the rough diamonds, however, remained under the same monopolistic control, and the United States and India remained the most important markets with a difference: the demand for gem diamonds was very strong, arising from the high level of money incomes, the absence of new durable consumers goods and the desire by some to hedge against the inflation risk.

TABLE 22: DIAMONDS, CUT BUT UNSET, SUITABLE FOR JEWELRY, IMPORTED BY UNITED STATES, 1939

	Less than 10 stones per carat		*10 or more stones per carat*	
Country of origin	*(Carats)*	*(Thousand dollars)*	*(Carats)*	*(Thousand dollars)*
Belgium	35,908	3,116	363,898	18,617
France	2,092	452	2,627	247
Germany			7	*
Netherlands	20,674	1,314	56,748	3,140
Switzerland			1,392	70
United Kingdom	981	142	2,303	129
Palestine			36	2
Union of South Africa	677	83	811	105
TOTAL	60,332	5,107	427,822	22,310

Source: *Foreign Commerce and Navigation of the United States*, 1939. U. S. Dept. of Commerce, p. 189.

* Less than 1,000 dollars.

The strength of the market in the United States may be judged by the value of imported diamonds per carat:

VALUE OF DIAMONDS IMPORTED BY THE UNITED STATES, 1939-44

	— Gem diamonds cut but unset —			*— Gem diamonds rough or uncut —*		
Year	*Carats*	*Value*	*Price per carat*	*Carats*	*Value*	*Price per carat*
1939	488,154	$27,417,273	$56.17	153,982	$7,956,397	$51.67
1941	229,582	18,346,415	79.91	215,026	10,301,371	47.91
1942	126,004	14,640,236	116.19	278,437	11,546,712	41.46
1943	194,000	31,500,000	162.37	751,000	37,000,000	49.26
1944	169,000	29,000,000	171.59	897,000	43,000,000	47.94

Source: *Foreign Commerce and Navigation of United States*, 1939-43, Table 1. Figures for 1944 from Report FT 110, U. S. General Imports of Merchandise, U. S. Dept. of Commerce.

Gem diamonds, cut but unset, more than tripled in import price, per carat, while the caratage imported in 1944 was only 35 percent of the caratage imported in 1939. Thus, despite the establishment of new cutting centers, the rising demand could not be met without a very substantial increase in price.

The same table also indicates that the United States was also attempting to establish itself as a cutting center, with Jewish diamond cutters from the Low Countries providing the nucleus and the impetus. Imported caratage of rough and uncut gem diamonds increased very rapidly, especially in 1943, by which time a considerable number of workers had been trained. In that year the estimated caratage imported exceeded the 1939 volume by some 400 percent.* Also significant is the fact that the import price per carat declined somewhat from the prewar level, despite the strong upward pressure on diamond prices. Very probably this is a reflection of a shift to the processing of the small stones in place of the larger stones which bring a higher price per carat.

By 1943 it was estimated that about 1,800 persons, including apprentices, were employed in the United States in the cutting trade, 1,000 of whom were organized in the Diamond Workers Protective Union of America. The industry is centered in New York City. Although average earnings are not known, they are believed to be very high. Cases have been reported of American cutters making as much as $250 in a 35-hour week. The American trade, however, has introduced some mechanical improvements that serve in part to offset the high labor costs.

In addition to the new cutting centers in Palestine and New York City, a third one of significance was established in the Union of South Africa, principally in Johannesburg, with the very active support of the Government. In 1943 about 550 artisans were employed. The Union has a 10 percent advantage against competitors, except shops in the United States, because of the 10 percent export duty on rough diamonds levied by the South African Government. This advantage, however, has been more than offset by high wage costs. In Johannesburg, for example, the wages of 400 qualified cutters ranged from £ 100 to £ 200 per month for a 40-hour week. It has been estimated that since 1939 wages have increased fourfold and cutting costs fivefold. In the light of this the South African diamond interests have concluded that the "Antwerp sizes" cannot be cut economically and that it would have competitive advantage only in the cutting of the large, fine rough. Accordingly, this made it easy for the De Beers diamond companies, the controlling interests in the entire diamond industry, to agree to re-establish the 8-cut industry in Belgium upon the war's termination. To that end diamond producers stocked fairly large quantities of small stones for cutting in Belgium. De Beers' policy in this respect was also influenced by a desire to retain the good will of the Belgian Congo interests, which have been the largest producers of industrial diamonds.

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* Cutting and polishing usually result in a large reduction in the weight of the rough diamond.

The Government of the Union of South Africa, interested in placing some of its discharged servicemen in the industry, agreed early in 1943 that "in case of a decrease in demand due to a depression, it will furnish rough diamonds to the master cutters, pay the wages of the cutters and their apprentices, and store the cut stones against a time of greater prosperity." It is obvious from this that the South African Government is determined to retain some share in the cutting trade.

Efforts also have been made to transplant the industry to Great Britain, Puerto Rico, Cuba, Mexico and Brazil. It is doubtful whether these efforts have any survival value, with the exception of Brazil. The press reports that some 3,000 cutters, presumably including apprentices, were employed in 1943 in the Brazilian industry. Wage rates are not known.

Belgian interests, in addition to the weighty influence of De Beers, are also committed to the restoration of the Antwerp cutting industry. The most important producer of rough gem diamonds suitable for 8 cuts, is the Societe Internationale Forestiere et Miniere du Congo (Forminiere) operating in the Belgian Congo. The Beligan Government itself is a major shareholder in this company. The latter, of course, is anxious to restore Antwerp as a cutting center. Accordingly, Forminiere has been reported as withholding from sale and storing in the Congo, fine cuttables against the day when the industry will be resumed in Belgium.

Still other protective measures were initiated by the Belgian cutting industry. In 1941 there was established in London the Correspondence Office of the Diamond Industry (Cofdi). Among its objectives is the arranging for the return of Belgian cutters to the homeland after the war and the restriction of rough gem diamonds to the new cutting centers.

It is too soon after the liberation of Antwerp to judge the relative ease or difficulty of restoring the city as a cutting center. It was not until early in February 1945 that the first shipments of "rough" were received by the Antwerp industry, which was able to reassemble about 4,000 workers compared with 23,000 prewar. The rate of expansion will depend in large part on the industry's success in attracting its former workers now resident abroad. The typical attitude of the former is reported as one of "watchful waiting."

In view of this very determined effort to restore the *status quo ante*, what are the postwar prospects for Palestine's branch of the industry? Even in the latter part of 1943 the Palestine diamond industry experienced difficulties in obtaining rough for 8 cuts, most of which originated in the Belgian Congo, due to the aforementioned measures. The shortage was sufficiently acute to cause some unemployment. This, in turn, precipitated a labor dispute that was not resolved in any satisfactory manner until the spring of 1944, and resulted in only very moderate reductions in wage costs.

At about the same time, the Palestine Diamond Manufacturers Association concluded an arrangement with the Diamond Trading Company for its future supply of rough diamonds. Out of deference to Belgian interests, the Palestinian manufacturers, beginning January 1945, were to receive monthly 20,000 carats of melees (33-35 polished stones per 100 carats of rough) and 20,000 of sand (8 to 33 polished stones per 100 carats of rough). Thus the character of Palestine's industry would have to be altered from the principal production of 8 cuts to the principal production of melees. Moreover, because of the difference in labor requirements for 8 cuts and melees, about half of the workers would be unemployed. Nor would the new supply arrangement provide the Palestinian industry with a sufficiently large variety of stones to diversify its skills and risks.

The all-around dissatisfaction with the agreement prompted the Palestinian Government, at the end of 1944, to organize a meeting in London of a delegation of the Palestinian industry, the Diamond Trading Company, the Belgian diamond interests, and the British Colonial Office. The latter was interested in supporting the Palestinian branch of the industry because the dollar exchange created by the industry improved the Colonial Office's standing with the British Treasury. The Diamond Trading Corporation realized that a strong industry in Palestine strengthened its bargaining position vis-a-vis the Belgian Congo interests. Antwerp dealers, aware of the difficulties of re-establishing the industry and the fact that as a result of inflation they too were high-cost producers, were agreeable to a live-and-let-live policy.

The resulting agreement concluded in January 1945 is favorable for the future development of the Palestinian industry. The Diamond Trading Corporation agrees to supply all types of "rough" —sand, melees, regular, and the yellow stones especially prized by the Arabic and Indian trade. This will make for a diversified industry but for increased specialization by individual firms. At current prices the supply of rough would amount to about £P 3,500,000 annually, which is sufficient to give employment to the present labor force of 3,200, provided 100 cleavers are available. There are now about 40 cleavers in Palestine, half of whom are considered as first rate. It is estimated that within 2 years these 20 could train the requisite number.

Once this transformation is accomplished, the industry will no longer be dependent on a single market—8 cuts in the United States. The Palestinians hope to contribute to the diamond industry by the intensive promotion of sales in the Middle East, a market that heretofore has been neglected.

At the same conference the Colonial Office agreed to an early relaxation of restrictions on new entrants into the Palestinian diamond industry. This not only would remove a dangerous monopolistic precedent but would also be helpful in mitigating some of the arbitrary and restrictive practices of the Palestine Diamond Manufacturers Association.

With respect to the supply of raw diamonds, the Palestinian branch of the industry enters the postwar period with good prospects. On the demand side it is impossible to be equally definitive. As for the general demand for diamonds, the factors that might be operative in the United States market must be given heavy weight, since this market usually absorbs about 80 percent of all cut diamonds. The American dealers are confident that demand will remain at a high level for the next few years. They argue that after World War I a great bull market developed and that conditions in the industry in 1919 were quite similar to those now current. It is pointed out that many soldiers were unable to purchase diamond wedding rings for their wartime brides and will do so shortly after their demobilization. Prices will remain high, the argument continues, because of the shortage of rough which cannot be relieved until manpower and equipment are made available to the diamond mines. There are offsetting considerations. It is probable that there will be a considerable decrease in the number of marriages, since so many were anticipated during the war years. Also, there is the belief that many Europeans hoarding diamonds during the war will flood the market with the return of peace and the passing of the inflationary dangers.

In the short run the favorable factors may very well prevail. With the completion of the transition to peacetime, however, it is more probable that the industry will revert to the level of operations that prevailed in the late thirties. The "take home" earnings of workers may be appreciably reduced from the wartime levels and a full complement of consumers goods will once more compete for the consumers' disposable income. The Diamond Trading Company, moreover, will be under even less pressure to lower prices than in the prewar years, since it will continue to derive considerable revenue from the sale of industrial diamonds, which was a relatively small source of income prior to the war.

While the United States market will continue to be important to the Palestinian diamond industry, it will lose, nevertheless, considerable of its wartime importance since Palestine will produce also the larger stones destined for the Middle East and India markets. In the latter market Palestine undoubtedly will be faced with competition of the Union of South Africa and the United States. Palestine would have the advantage of lower wages, although this factor is of lesser importance in the cutting and polishing of the larger diamonds than in the preparation of 8 cuts.* With respect to the 8 cuts on the United States markets, at the outset at least, Palestine will be competitive with Antwerp since the latter's wage costs are also high. In fact, these two centers do not fear each other so much as they both fear the cheap-labor competition of Brazil.

If in the second half of the postwar decade the conditions of the late 1930's again return to the diamond trade, Palestine's diamond industry will be obliged to undergo a drastic deflation of wage and profit rates. Under such conditions Palestinians may be more resilient because of their demonstrated capacity to combine agriculture with industry in the communal farm settlements. Palestinian diamond workers should be made to realize that lean years are more characteristic of the industry than are the fat ones they have been enjoying. Too often the industry has been reduced to a home-work basis in order to survive. Palestine may do well to anticipate this necessity.

What then is the probable magnitude of job opportunities to be provided by this industry in 1954? In our view the industry should be able to maintain its present size of 3,000 to 3,500 workers, although the wages will not be nearly so lucrative as at the outset of the decade. Even the continuance of the present scale will be dependent on effecting several important adjustments: the development of new skills for the new types of stones, the maintenance of an elastic structural organization, and improvements in the grading and selection of the polished stones, as well as the simplification of the marketing organization.

Thus the employment possibilities permitted by the present arrangement for the supply of rough diamonds would be fully exploited. If we are correct in assuming that the industry will be faced with the conditions of the 1930's by the end of the decade, the only possibility for expansion would be by the transfer to Palestine of part of the industry now outside of the country, provided their right to rough diamonds is also transferable. It is possible, for example, that some of the Jews constituting the backbone of the revived industry in the Low Countries might find the atmosphere too hostile and seek refuge in Palestine, or those who have come to the United States might find the adjustment too difficult and believe that Palestine would afford an easier adjustment. We shall not make any quantitative allowance, however, for such contingencies.

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* It should be noted that in 1944 almost one-quarter of Palestine's diamond exports were marketed in India, compared with 5 percent in the previous year.

Refined Petroleum Products

The construction of the Haifa petroleum refinery was initiated in 1938 but not completed until after the outbreak of hostilities. Only in this sense can it be considered a wartime industry. From the very inception of operations the refinery production was geared to the wartime needs of the United Nations. The products resulting from the crude cracking of petroleum (furnace oil, gasoline, gas oil and kerosene) were deemed most suitable for production at the Haifa plant of the Consolidated Refinery Company.

Originally the refinery was designed to handle the crude oil piped to Haifa. During the course of the war its capacity was gradually increased in order to process the oil from the Tripoli terminus of the pipeline, which was brought to Haifa by tanker. By the latter half of 1944 the daily intake capacity of the Haifa refinery was 80,000 barrels of crude oil. The following table records the consumption of crude oil by the Consolidated Refineries, and the type and volume of the refined products beginning with 1941.

CONSUMPTION OF CRUDE OIL BY CONSOLIDATED REFINERIES AND PRODUCTION OF REFINED PETROLEUM PRODUCTS

(*Metric tons*)

	Consumption of crude oil	*Benzine*	*Kerosene*	*Gas oil*	*Furnace oil*
1941	1,204,190	256,150	93,224	88,179	720,558
1942	2,044,104	583,297	157,221	161,184	1,007,471
1943	2,768,225	551,219	230,295	306,760	1,577,042
Monthly avg. Jan.-Aug. 1944	248,189	45,433	21,084	29,925	141,804
Sept. 1944	338,875	60,938	27,121	45,292	191,620

Source: Supplement to *General Bulletin,* Nov. 1944.

The sharp increase in September 1944 over the average for the preceding 8 months indicates the completion and utilization of new capacity. Civilian consumption of these products in Palestine amounted only to 445,174 metric tons or 16.7 percent of the total tonnage of refined products. The balance has been consumed by civilians and military elsewhere in the Middle East.

Production for 12 months at the September 1944 rate of output would yield a total of 3,900,000 tons of refined products. This rate will be maintained even after the crude oil terminating at Tripoli is once more sent to France for refining, since the capacity of the pipeline to Haifa will be more than doubled according to present plans. The annual prewar consumption of refined petroleum products in the Middle East countries, including Iran (served by its own refineries) and Turkey (possibly more economically served by the Roumanian refineries) was 1,250,000 to 1,500,000 tons. With the exclusion of Turkey and Iran, consumption would have been in the neighborhood of 1,000,000 tons. Even after allowing for a doubling of prewar consumption there would still remain about an equal amount for overseas export, presumably for Great Britain, which received a large share of the prewar export of crude oil. The employment of Jews in this production for overseas exports may involve several hundred, say 250.

Any expansion of employment at the Haifa refineries beyond wartime levels will result from the exploitation of the by-products of petroleum refining. Certain of the by-products utilize the waste materials of the refining process. Hence they must be exploited by the refinery itself or in close cooperation with it. To date, the only waste by-product utilized, and that by arrangement with another company, is asphalt. The wartime demands precluded any other such developments. The local management, however, expressed the view that their postwar plans called for by-product production provided the country remained at peace. No information as to kinds of products, scale of operations, or potential markets was forthcoming. Presumably many of the technicians and more skilled workers would be drawn from the Jewish community. Perhaps it would not be overly optimistic to allow 100 jobs for Jews. What other industries these by-products might make possible cannot even be suggested at the present time.

One type of by-product utilization, however, is not dependent upon the initiative or good will of the Haifa refineries. This type makes use of one of the end-products of the refining process sold to the general public. Thus if cheap ethylene were available it could serve as starting materials for a number of products useful as solvents, emulsifiers and plasticizers. It is questionable whether this is a fruitful lead, since petroleum products have never been cheap in Palestine.

The possibility of constructing a pipeline from the Arabian oilfields to somewhere in Palestine still remains in the realm of speculation. Moreover, if Palestine should be only a terminus of a pipeline rather than the locus of a refinery, the project would not add greatly to total employment and still less to the employment of Jews.

Art and Handicraft Work

In a special sense Palestinian art and handicraft objects may also be said to have developed an overseas market during the war years. This was accomplished through sales to soldiers who purchased for shipment abroad. While this has been a very lucrative market, it has not been a highly discriminating one and consequently the long-run effect will not be entirely beneficial. It has retarded the development of original designs and quality workmanship. On the other hand, the opportunity of working with a variety of materials has provided a basis for evaluating the potentialities of each. It has been demonstrated also that Palestine's best work is suitable for international trade at least in terms of design and craftsmanship, if not in price. This would apply to the silver jewelry, embroidery work, handwoven table linens and luncheon sets, leather handbags, wood carving and ceramics.

Skillful guidance is required to sustain and to impart to others quality craftsmanship and sense of design as well as to direct such talents into commercial channels. The Women's International Zionist Organization (WIZO) and the Handicrafts Department of the Jewish Agency have formulated and already initiated forward-looking plans. These involve the inculcation of a spirit of good workmanship by a fundamental reform in the teaching of manual education in the school system. Instruction in manual work in all grades will be given in accordance with a unified and systematically planned curriculum. The most gifted of these students will have a chance for very specialized training at the New Bezalel School of Arts and Crafts in Jerusalem. This school, staffed with first-class European artists and art teachers, is to be transformed into the central academy for all branches of arts and crafts. Its graduates, it is hoped, will be the future creative craftsmen, the teachers in the public schools and supervisors in the workshops. Apprentice arrangements have been worked out whereby the apprentices are enabled to receive formal training at the New Bezalel school. While this procedure is a slow one, it would seem an eminently sound one since it goes far towards assuring quality designs and workmanship; and only quality products will be marketable.

Also, on the financial and commercial side of the problem, important beginnings have been made. Credits are available both from the Jewish Agency and from private banks, while the WIZO is prepared to open shops in the very large cities of the United States, in Great Britain, Union of South Africa and in Buenos Aires, where at the very least they could count on sympathetic reception from the Jewish communities. However, if they achieve the quality which present potentialities indicate are possible, the products will find acceptance among non-Jews, especially when one considers that in the first half of the postwar decade the handicraft industries of central Europe probably will not have had an opportunity to re-establish themselves on international markets. Moreover, one should not overlook the possibilities of considerable sales to tourists. Employment based on overseas and tourist trade might well involve 1,000 full and part-time workers by the end of the decade.

Citrus Concentrates and By-products

A beginning, though admittedly a weak one, was made during the war in the processing of citrus concentrates for an overseas market, Great Britain. Concentrates seemed to be the only way to reconcile the British need for citrus vitamins with the shipping shortage. Unfortunately, the quality of the concentrates was poor, and as a result it is a moot point whether the concentrates can compete for consumer preference (despite a price advantage) when fresh citrus is again available. Corrective measures have been initiated already with the help of British Ministry of Food and representatives of the Palestine concentrates industry. The latter have had the opportunity to inspect plants in England and the United States. There seems to be no reason why the technical conditions for a quality product cannot be satisfied at a competitive cost in Palestine.

The market demand on the part of final consumers remains speculative. Doubts have already been expressed concerning whether England will revert to its prewar preference for fresh fruit. In most of the European continent, however, the prewar per capita consumption of citrus fruit was very low because it was too costly for the middle and low income groups. The cheapness of the concentrates due to the saving on transportation may make citrus available to this large potential market. The form in which consumers first receive citrus is very influential in the determination of preference. For this reason, it is important whether UNRRA decides to include citrus concentrates among foodstuffs to be distributed among the European peoples. By the end of the first postwar decade, in our view, the demand for citrus concentrates will not be in the limiting factor.

Exactly how far can Palestine develop this branch of industry? Some Palestinians have assumed that the entire citrus crop could be utilized in this manner. This view neglects the very serious consideration that the citrus concentrates and citrus by-products industry must be based on very cheap fruit. In the past this has meant that only fruit unsuited for export could be utilized. Its cost was merely that of picking and trucking. The implication of the former view is the disappearance of an export market for fresh fruit at any price higher than that paid for culls. Such an eventuality would spell the bankruptcy of citriculture and have very serious repercussions for the total Palestinian economy. The discussion of the preceding chapter indicates that this possibility in indeed remote.

The development of the citrus concentrates, then, is dependent on the volume of non-exportable fruit. Our discussion of the prospects of citriculture suggests that the currently planted citrus area will be rehabilitated by 1948 and will yield an export crop of 17.6 million cases and culls amounting to 115,000 tons. The further expansion in planted citrus area which we envisage by 1954 would result in an additional 30,000 tons of non-exportable citrus fruit. In the season 1943-44 about 45,000 tons of citrus were used for industrial purposes. On this calculation the industry could expand by about 200 percent beyond its wartime size, when some 1,500 were employed. After allowance for increased efficiency, the potential expansion might involve an additional 1,500 persons or a total of 3,000. About 2,250, three-fourths of the total, could be considered as engaged on production for overseas exports.

Achievement of the potentialities is dependent on more than the production of a quality product; it is dependent also on the organization of an integrated industry exploiting the citrus by-products. Among the latter are essential oils, fruit juice, dry fodder, fermented mash, fruit wine, fruit vinegar, black dyes, essences, pectin, calcium citrate and ascorbic acid. The present structure of the industry would have to undergo considerable reorganization, since the utilization of by-products requires a different scale of operation than the production of fruit juices or concentrates.* Promising steps in this direction have been initiated.

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* For example, there could be only one plant for the manufacture of pectin. This suggests that all the citrus products plants must be close to each other in the citrus-growing area in order to reduce transportation costs. According to this reasoning, the plant at Ashdoth Yaakov, in the northern end of the Jordan Valley, could not continue to operate in this industry since it must first transport its fruit from the Sharon and then retransport to the Sharon its own product for export and the citrus residue for by-product utilization.

Optics, Scientific Glassware, and Other Industries

Two other budding industries with potential exports to overseas markets have utilized wartime opportunities to train a labor force. One of these industries is being organized around Prof. Isaac Goldberg's eminent scientific accomplishments in the field of optics. In the course of making advanced optical instruments for the British military forces, Prof. Goldberg has been able to train a nuclear staff of some 20 young persons in precision optical work. In most instances only single instruments were produced. With the virtual cessation of these orders, Prof. Goldberg and his financial backers are prepared to initiate an enterprise to manufacture in series several optical instruments long used in laboratories but now commonly used in manufacturing processes. Their efficient use calls for significant adaptations in design which Prof. Goldberg has created. The important factors in such an industry are highly skilled labor and a far-flung marketing organization. The lack of indigenous raw materials does not constitute a serious handicap. As to a trained labor force, important beginnings have been made and these could be supplemented without too much difficulty by drawing upon graduates of the physics departments of the Hebrew Technicon and the Hebrew University for the key technical positions. While the project will get off to a modest start, it is not unreasonable to expect that some 500 persons will be employed by the end of the decade.

The other industry already launched makes scientific glassware. The world over this has remained a handicraft trade and therefore is dependent upon the development of the requisite skills. The physics department of the Hebrew University in partnership with Phoenicia, the manufacturer of plate glass, is now engaged successfully in training apprentices. Prior to World War II Germany was the major exporter of this type of product. It would be more than poetic justice if Palestine were able to take over part of this market. Modest success would involve the employment of, let us say, 150 persons.

Whether Palestine's style goods industry can establish itself in certain overseas markets has not yet been determined, due to wartime conditions. But the very same factors, discussed below, that assure the industry's success in the Middle East markets should make it possible for it to enter such overseas markets as South Africa, Australia, New Zealand, and possibly even south east Europe. The latter had been largely dependent upon this Jewish industry located in Germany and Austria, which very probably will not be re-established there. We allow 500 jobs for supplying the markets beyond the Middle East.

The industries thus far discussed constitute the more obvious industries with potentialities in markets overseas. Other possibilities that have been mentioned seem much too speculative to warrant inclusion on our list. For example, the manufacture of wine barrels was largely centered in Danzig, based on Russian timber. Most of the barrels were then marketed in France, Portugal, Spain, Italy, Palestine and other Mediterranean countries. It has been suggested that the Palestinian climate is much more suited than the Baltic climate for seasoning of the wood and that it would be much nearer the major markets. The latter is of some importance since it is more costly to transport empty barrels than timber. Another advantage in favor of Palestine is that the former distributor is now resident in Palestine. Although this is a temporary advantage, it might be an important one in the initial stages. For this industry to flourish in Palestine it would be necessary to establish a free port area or an efficient drawback system or to abolish the duty on wood. In the event arrangements are made for the duty-free entry of raw materials, other industries might also be attracted such as coffee roasting, which heretofore has been centered in Trieste for the entire Mediterranean.

It may be possible to establish a case for still other industries. In the following summary of jobs in industries with overseas markets, these hypothetical cases are excluded. To the extent that some of these industries might materialize, we impart a conservative bias to our approximations.

SUMMARY OF PROBABLE POTENTIAL JEWISH EMPLOYMENT IN 1954 IN INDUSTRIES WITH OVERSEAS MARKETS

Dead Sea chemicals	1,500
Artificial teeth and medical equipment	400
Cutting and polishing of diamonds	3,250
Petroleum products, including by-products	350
Arts and handicrafts	1,000
Citrus concentrates and by-products	2,250
Optical measuring instruments	500
Apparatus made largely of glass	150
Style goods	500
TOTAL	9,900

PRODUCTION FOR THE DOMESTIC MARKET

Basic Assumptions

What level of employment may be expected in Palestinian manufactures designed to supply local markets at the end of the first postwar decade? This problem is extremely complex under the best of circumstances; it is especially complex when one of the governing assumptions, viz., the volume of immigration, is expressed as a variable. To simplify the discussion, we assume initially that there will be no immigration and that population growth will result only from natural increase.

Were there actually to be no immigration—and were that situation to be accepted with satisfaction by the Jewish as well as the Arab community—there is every reason to believe that there could be a substantial rise in per capita incomes during the next decade. However, given the necessity of bringing a large number of unskilled immigrants into the country, training them for new occupations and incorporating them in new or rapidly expanded enterprises, it seems unlikely that the Jewish community can achieve a substantial per capita rise. For the Arabs, Jewish immigration should continue to open up new economic opportunities, and in their case a slow continued rise in average incomes seems assured.

To make our analysis of production possibilities on the assumption of no immigration most useful for the later steps in which immigration is specifically included, we have throughout assumed constant Jewish per capita incomes at the real level attained in 1935-39. We shall particularly use the experience of the year 1936 for several important clues because most detailed information is available for that year. In our judgment, this procedure will tend to make our conclusions err on the conservative side.

Market Possibilities

The problem of estimating employment in domestic production for local consumption may be subdivided into two parts. One type of manufactures serves a highly localized market, a factor which virtually precludes importation of these commodities. This type of manufactures is characterized by such qualities as perishability, low value and large bulk, or the necessity of personal contact between purchaser and seller. These commodities or industries are listed in Table 23 along with the per capita consumption of these articles by the Jewish population in 1936 and the estimated total Jewish consumption in 1954. On the assumption of a 20 percent increase in real productivity of labor between 1936 and 1954, the number employed in these industries, including proprietors, would be about 11,700 at the end of the decade, compared with nearly 7,900 in 1936.

There is another group of industries based on secondary or tertiary stages of fabrication of imported materials. Many of these industries, if the marketing area possesses some labor skilled in modern technology, may be regarded as market-oriented. This follows from the fact that frequently the transportation cost of raw and semi-processed materials, particularly when they are not "weight-losing," is less than the transportation cost of the finished products which are often irregular in shape and consequently require more shipping space than the raw and semi-processed materials. Markets under such circumstances become the assembly-points of materials for final processing.

TABLE 23: ESTIMATED CONSUMPTION OF AND EMPLOYMENT IN SPECIFIED HIGHLY LOCALIZED PALESTINIAN INDUSTRIES AT THE END OF THE FIRST POSTWAR DECADE ON THE ASSUMPTION OF NO NET IMMIGRATION*

Industry	*Jewish per capita consumption, 1936 (£P)*	*Estimated total Jewish consumption, 1954 (Thous. £P)*	*Estimated employment in 1954 with 20% increase in productivity over 1936 (Persons)*
Slaughter houses	.051	33	75
Coffee grinding	.086	56	100
Bread, factory	1.633	1,071	1,700
Matzoths	.196	129	200
Aerated soda water	.094	62	200
Beer and mead	.212	139	125
Ice cream	.063	41	150
Ice and cold storage	.185	121	325
Tailors	.101	66	525
Dressmakers	.038	25	375
Mattresses and upholstery	.083	54	175
Umbrellas and window shades	.020	13	50
Foundries	.219	144	250
Plumbing	.302	198	525
Machinery repairs	.109	72	300
Carriages, children	.048	31	100
Picture frames	.012	8	50
Orthopedic works	.026	17	75
Printing: Book and periodical	.198	130	575
Printing: Advertising material	.340	223	750
Printing handicrafts	.008	5	50
Lithographing	.041	27	75
Plate printing	.027	18	50
Cliches	.036	24	100
Signboards	.040	26	150
Publishing: Book and periodical	.457	300	925
Bookbinding	.026	17	125
Hewn and crushed stone	.180	118	850
Unhewn stone	.030	20	175
Crushed stone for building	.186	122	425
Crushed stone for concrete	.029	19	50
Cut stone	.015	10	25
Monuments	.109	72	225
Pipes and tiles, concrete	.298	195	425
Concrete parts, factory	.436	286	800
Concrete parts, handicraft	.066	43	125
Roofing tiles and bricks	.1 7	90	200
Bricks, silicate	.088	58	150
Glaziers	.024	16	25
Concrete building blocks	.044	29	75
Vulcanizing	.012	8	50
TOTAL		4,136	11,700

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*Per capita Jewish consumption assumed to be equal to per capita Jewish production as reported in the Jewish Census of Manufactures for 1936. Productivity figures also based on the same source. For population estimate see Chapter 22.

Manufactured articles of this character accordingly had achieved some production in Palestine in prewar years. Imports, however, still constituted in those years an important fraction of the total supply of these products. With the help of the protection provided by the exigencies of the war, many of these industries have expanded their productive capacity and, more important, have added considerably to their industrial know-how. There is reason to believe, therefore, that a substantial part of the prewar imports of a significant list of manufactured articles could be replaced by local manufacture. In some instances, as in the case of petroleum products, the replacement stems from the establishment of an entirely new industry rather than from the expansion of a pre-existing industry. These products are listed below:

TABLE 24: VALUE OF PALESTINIAN IMPORTS OF SPECIFIED MANUFACTURES, ESTIMATED PERCENTAGE REPLACEABLE BY DOMESTIC PRODUCTION BY 1954, AND ESTIMATED NUMBER OF EMPLOYEES REQUIRED, ASSUMING NO POSTWAR IMMIGRATION

Commodity or industry	*Amount imported, 1937 (Thous. £P)*	*Percentage replaceable by 1954 (Percent)*	*Workers required in 1954 (Number)*
Chocolates, sweets and marmalades	44	75	175
Macaroni, biscuits and cakes	23	75	75
Mineral waters, beer, cognac, etc.	64	80	225
Wheat flour	416	90	550
Cheese	42	90	50
Tomato juice and other tomato products	10	90	25
Cigars and cigarettes	59	50	75
Asphalt	92	100	150
Cement	146	100	225
Plate glass and window glass	47	100	150
Empty bottles and jars	44	80	125
Glassware, domestic and fancy	30	50	50
Tiles for paving and for walls	70	100	225
Enameled cast iron baths	14	100	50
Enameled ware, other	12	60	25
Sanitary ware, iron	29	60	75
Sanitary ware, non-ferrous	43	50	50
Sanitary ware, other	41	50	100
Iron furniture	9	50	25
Iron nails, bolts and nuts	42	80	125
Iron wire netting	10	65	25
Cast iron pipes	32	50	50
Iron pipes, other	238	50	325
Iron pipe fittings and drawing tubes	66	50	125
Stoves	28	50	50
Primus stoves	11	100	25
Printer's type	6	65	25
Hot rolled mild steel wire and strip in coil	11	100	25
Cutlery	19	25	25
Door and window fittings	40	100	125
Blades for safety razors	5	100	75
Iron and steel mfg., other	300	50	650

TABLE 24: VALUE OF PALESTINIAN IMPORTS OF SPECIFIED MANUFACTURES, ESTIMATED PERCENTAGE REPLACEABLE BY DOMESTIC PRODUCTION BY 1954, AND ESTIMATED NUMBER OF EMPLOYEES REQUIRED, ASSUMING NO POSTWAR IMMIGRATION (Continued)

Commodity or industry	*Amount imported, 1937 (Thous. £P)*	*Percentage replaceable by 1954 (Percent)*	*Workers required in 1954 (Number)*
Lead manufactures	13	50	25
Aluminum domestic ware	4	90	25
Aluminum mfg., n.e.s.	7	60	25
Brass and copper mfg., n.e.s.	37	50	75
Water meters	38	75	100
Incubators and brooders	3	100	25
Agricultural, arboricultural, and horticultural tools and implements	14	75	50
Other tools and implements	59	60	275
Machinery, industrial and mfg.	250	40	575
Component parts of machinery enumerated above	123	40	300
Accumulators and boilers and parts thereof for use in connection with machinery enumerated above	56	100	350
Machines and parts, other, n.e.s.	84	50	250
Dental, medical, optical and veterinary instruments and appliances, n.e.s.	77	25	125
Scientific instruments and appliances, n.e.s.	10	50	25
Electric meters	12	75	25
Electric pumps	38	65	100
Motor car accumulators and batteries	7	80	25
Electrical apparatus, n.e.s.	90	25	75
Other electrical goods	111	40	175
Electric cable and wire, insulated and pipes	99	100	425
Plywood	66	100	275
Veneer wood	5	100	25
Furniture of wood	74	50	225
Cotton yarn	81	80	225
Cotton thread	30	80	100
Cotton piece goods, grey, bleached, dyed and printed	444	80	1,225
Cotton mfg., n.e.s.	81	50	150
Woolen and worsted yarn	64	25	50
Woolen tissues	266	50	450
Artificial silk crepe	92	75	225
Artificial silk tissues, other	117	75	300
Ladies' dresses of silk and artificial silk	14	75	75
Other wearing apparel of silk and artificial silk	66	75	325
Socks and stockings	52	90	175
Wearing apparel of wool	74	60	275
Pyjamas, shirts, tricot underwear, and knitted underwear of other materials	77	75	275
Other wearing apparel of other materials	82	50	325
Linen mfg.	173	35	225
Boots, shoes, slippers and sandals with uppers of leather	90	50	225
Boots and shoes with uppers of rubber	10	75	50

TABLE 24: VALUE OF PALESTINIAN IMPORTS OF SPECIFIED MANUFACTURES, ESTIMATED PERCENTAGE REPLACEABLE BY DOMESTIC PRODUCTION BY 1954, AND ESTIMATED NUMBER OF EMPLOYEES REQUIRED, ASSUMING NO POSTWAR IMMIGRATION (Continued)

Commodity or industry	*Amount imported, 1937* (*Thous. £P*)	*Percentage replaceable by 1954* (*Percent*)	*Workers required in 1954* (*Number*)
Tanned hides and sole leather	70	75	75
Leather, chamois, designed, glazed kid and tressed	18	75	25
Belting for machinery	8	75	25
Leather mfg., other	79	75	325
Potassic fertilizers	12	100	25
Phosphatic fertilizers	25	100	75
Other fertilizers, chemical	54	50	75
Potassium chlorate, citric and sulphuric acids	12	100	25
Other chemicals	35	25	25
Disinfectants and insecticides	20	50	25
Drugs	134	75	425
Toilet preparations and perfumery	30	75	100
Dentifrices	6	75	25
Paints, colors, varnishes, lacquers and ochre	61	80	100
Fuel oil	259	100	50
Kerosene in containers and in bulk	189	100	25
Motor spirits	232	100	25
Lubricating oil and grease	71	100	25
Other oils, fats and waxes, manufactured	35	80	50
Rubber heels, soles and attachments for boots and shoes	9	100	25
Rubber tires and tubes	104	90	50
Other rubber mfg.	36	75	100
Glue	9	100	25
Toys and games	33	80	175
Brooms and brushes	18	80	75
Used personal effects	319	50	625
TOTAL	7,021	69	15,025

Source: Import data taken from Palestine *Annual Report* on Statistics of Imports, Exports and Shipping for 1937. Percentage replaceable based on personal judgment; productivity figure implicit in computing number of employees based on 1936 Census of Jewish Manufactures increased by 20 percent with exception of petroleum refining which is based on American experience and estimated at £P 5,000 per employee.

Imports of the above were high in 1937 but not the highest achieved in prewar years.) Also entered is the value of 1937 imports estimated as capable of production in Palestine by the end of the postwar decade, on the assumption of a tariff policy that prohibits dumping.* With the further assumption that real annual productivity per worker in 1954 would exceed the 1937 level of productivity by 20 percent—an increase of a little better than 1 percent per year—it is possible to compute an estimate of the employment to be provided by this additional production. Calculated upon the basis of the 1937 Jewish population, about 9,800 persons would be required for this production. For the Jewish population expected for 1954, with no allowance for any postwar immigration, about 15,000 would be employed.†

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*This method, of course, is vitally dependent upon value judgments. Our only defense is that we have taken very considerable pains to become informed and that these judgments are clearly indicated. Those who differ on details can make appropriate adjustments in the calculations.

To the latter number must be added the persons already employed in the local production of many of these same commodities that were being imported. It is this production that has and will provide the basis in many instances for replacement of prewar imports. In 1937, about 12,000 were employed in these industries. Under our assumption of increased efficiency, some 9,600 would be required in 1954 to manufacture the prewar volume of production. Since, however, the Jewish population in 1954, even without postwar immigration, will be half again as large as the 1937 population, about 15,000 persons would be engaged in these manufactures.**

PRODUCTION FOR MIDDLE EAST MARKETS

If we are correct in our contention that these industries in the main are market-oriented, could Palestine become the locus of manufacture for neighboring countries, assuming peaceful relations? It would appear, off-hand, that if these products could be produced economically in Palestine, they also could be manufactured in the neighboring countries. This view, however, overlooks an important qualification—the presence of technical know-how and a labor force with modern industrial training. For the most part, these essential ingredients are missing in the Middle East countries, Palestine excluded, and will be developed only slowly during the next ten years.*

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†Although not all the products on this list are final consumers goods, it is assumed nevertheless that their total consumption will vary directly and in the same degree as population changes.

**The extrapolation of prewar production in Jewish establishments and of prewar imports of manufactured goods on the basis of natural increase of the Jewish population probably minimizes the estimated increase. Some of these products were in fact consumed by the non-Jewish population. Implicit in our procedure are the assumptions that the rate of natural increase and the per capita consumption are identical for the two communities. Elsewhere we have assumed that the rate of natural increase of non-Jews will be much higher than for the Jews and that an increasing proportion will be consumers of Jewish produced goods. This will be offset in part by the fact that even with a rising standard of living the per capita consumption of the non-Jews will not equal that of the Jews at the end of the decade.

*It is very possible that local capitalists in the Middle East will be able to "import" well qualified factory managers from Germany, where their prospects appear grim. This still leaves, of course, the problem of a skilled labor force.

Palestine enjoys a general labor advantage over its neighbors and a transportation advantage over the prewar exporters located chiefly in western and central Europe. How much employment could be provided by these potential export markets would depend, obviously, on the volume of the exports. An approximate idea of the order of magnitude may be suggested by the volume of these imports in the few years preceding the outbreak of the war.

In addition to Palestine, the Middle East is defined as Turkey, Syria-Lebanon, Iraq, Iran, Saudi Arabia, Transjordan, and Egypt. The imports of manufactured goods in 1938, a peak year for imports in these countries in the prewar period, were examined to determine which imports could be supplied by Palestine. In many instances the commodity classifications were too broad for any careful consideration of potential export markets. To err on the conservative side in such instances, the share of imports allotted to Palestinian manufactures in most cases has been placed at a relatively low percentage of the total imports involved. Needless to say, this part of the estimate involves a large element of personal judgment. The potential exports from Palestine to these Middle East countries were converted to employment requirements by the use of the productivity figures used in deriving the employment requirements for the production to be marketed in Palestine.

These potentialities, as reflected in the employment possibilities, are presented in Table 25. Although principal imports of manufactured goods in the Middle East countries amounted to £P 64.5 million in 1938, the categories of products which Palestine would be in a position to export to this area by 1954 would represent only one-third of this total and actual exports only about 10 percent. The latter would give rise to the employment of approximately 9,000.

TABLE 25: VALUE OF IMPORTS OF MANUFACTURED GOODS IN EACH OF THE MIDDLE EAST COUNTRIES, PROBABLE REPLACEMENT BY PALESTINIAN MANUFACTURES, AND RESULTING EMPLOYMENT REQUIREMENTS

	Value of total imports			
Country	*Of principal manufactured goods, 1938 (Thous. £P)*	*Of type that Palestine may be able to export (Thous. £P)*	*That could be replaced by Palestinian exports (Thous. £P)*	*Number of persons required to produce these exports*
Egypt	26,000	10,800	3,300	2,775
Syria-Lebanon	5,400	2,400	1,000	1,450
Turkey	17,100	3,200	800	1,625
Iraq	6,700	3,100	800	1,625
Iran	9,300	3,500	900	1,425
Transjordan and Saudi Arabia				100
TOTAL	64,500	23,000	6,800	9,000

Source: See Tables 26-30.

TABLE 26: EGYPTIAN IMPORTS OF SPECIFIED MANUFACTURES IN 1938, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES

Commodity or industry	*Egyptian imports, 1938* (*Thous. £E*)	*Percentage that may be replaceable by imports from Palestine* (*Percent*)	*Estimated number of employees* (*Persons*)
Benzine	166	100	25
Kerosene	1,136	100	125
Oils, lubricating	228	100	25
Oils, diesel, fuel, mazout, gas solar	649	100	75
Fertilizers	2,935	5	275
Oils, vegetable for soap mfg.	250	40	100
Other chemicals	401	15	175
Pharmaceuticals	534	30	450
Cosmetics	129	50	175
Tubes and pipes, iron, steel, or malleable cast iron	309	15	125
Fabrics, silk, natural and artificial	430	30	300
Piece goods, pure cotton	2,828	5	325
Clothing	133	30	125
Hosiery	309	30	475
TOTAL	10,437	30	2,775

Source: Egyptian import statistics supplied by Bureau of Foreign and Domestic Commerce, United States Dept. of Commerce, from official Egyptian reports. Conversion into Palestinian pounds at the rate of 1.03 £P to a £E, the average rate for the year. The assumptions as to productivity implicit in employment estimate same as in Table 24.

TABLE 27: IMPORTS OF SPECIFIED MANUFACTURES INTO SYRIA AND LEBANON IN 1938, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES

Commodity or industry	*Syrian and Lebanese imports,* 1938 (*Thous. £S-L*)	*Percentage that may be replaceable by imports from Palestine* (*Percent*)	*Estimated number of employees* (*Persons*)
Confectionery	159	25	25
Chocolate and articles of chocolate	190	25	25
Peanut oil	608	50	25
Beer	102	75	25
Wines, brandy, etc.	166	75	50
Other prepared foods	245	25	25
Petroleum in casks, cars, cylinders, or bulk	1,006	100	25
Gasoline	1,692	100	50
Other petroleum products	911	100	25
Pharmaceutical products, substances, and various preparations used exclusively for medicine	721	30	75
Cosmetics, soaps and toiletries	740	50	125
Other chemicals	232	75	25
Leather products	125	50	25
Fabrics of artificial silk	696	35	150
Cotton fabric and other cotton goods	8,067	15	325
Hosiery of silk, cotton, or wool	499	30	50
Lingerie, ready-to-wear, and similar articles	521	30	50

TABLE 27: IMPORTS OF SPECIFIED MANUFACTURES INTO SYRIA AND LEBANON IN 1938, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES (Continued)

Commodity or industry	*Syrian and Lebanese imports, 1938 (Thous. £S-L)*	*Percentage that may be replaceable by imports from Palestine (Percent)*	*Estimated number of employees (Persons)*
Furs, prepared and mfg.	20	75	52
Tubes and pipes, rubber tires and tubes, and other rubber products	833	90	50
Pipes and fittings and wire of all sizes incl. stretched, galvanized, or bronzed	350	25	25
Cables and wires insulated for electricity	197	90	50
Other iron, steel, cast-iron, and articles thereof	1,681	25	125
Crockery and porcelain ware for table or ornamental uses, glass containers, and crystal glassware	410	25	25
Veneer and plywood	167	75	50
TOTAL	20,338	42	1,450

Source: Syria-Lebanon import statistics supplied by Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce, from official Syrian-Lebanese reports. Conversion to Palestinian pounds at the rate of 8.5 £S-L to the £P, average for the year. The assumption as to productivity implicit in employment estimate same as in Table 24.

TABLE 28: TURKISH IMPORTS OF SPECIFIED MANUFACTURES IN 1938, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES

Commodity or industr	*Turkish imports in 1938 (Thousand Turkish £)*	*Percentage that may be replaceable by imports from Palestine*	*Estimated number of employees (Persons)*
Iron and steel manufacture; other, incl. wire, nails, furniture, tools, and hardware	7,479	15	400
Steam boilers, tubular, semi-tubular, or with other fittings	272	25	50
Iron pipes and joints of all kinds	2,799	15	175
Copper wire, plain, polished, incl. insulated copper wire	879	75	300
Chemical fertilizers	537	25	50
Chemical products and medicines	3,188	25	350
Hides and skins, all kinds; green, dry, tanned and untanned	3,430	25	125
Wearing apparel, knit goods, hosiery, hats made of wool, hair, cotton, silk and rayon	329	50	100
Automobile tires and tubes	840	90	75
TOTAL	19,753	25	1,625

Source: Turkish import statistics supplied by Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce, from official Turkish reports. Conversion into Palestinian pounds at the rate of 6.2 Turkish pounds to one £P, the average for the year. The assumptions as to productivity implicit in employment estimate same as in Table 24.

TABLE 29: IRANIAN IMPORTS OF SPECIFIED MANUFACTURES, 1937-38, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES

Commodity or industry	*Iranian imports, 1937-38 (Thousand rials)*	*Percentage that may be replaceable by imports from Palestine (Percent)*	*Estimated number of employees (Persons)*
Porcelain, various types and sundry ware and mfg.	4,877	15	25
Wires and cables of iron, steel and copper	6,724	75	50
Pipes and joints of iron and cast iron	7,620	15	25
Nails, screws, rivets, nuts and tacks	10,626	30	75
Iron and steel furniture, surgical chairs, door and window frames, baths, wash basins and seat water closets	1,826	50	25
Household and kitchen utensils, vases and other wares of aluminum, all types	2,126	50	25
Window and plate glass	3,275	90	75
Pharmaceutical vials	2,768	75	50
Tanning and dyeing extracts and chemicals	3,095	30	25
Patent medicines	4,958	30	50
Drugs, chemicals, other	3,201	40	50
Matches	2,625	90	100
Cotton cloth	183,118	10	500
Wearing apparel, hosiery, gloves, etc.	2,385	40	50
Skins, tanned, of cow, calf, buffalo, etc.	3,109	25	25
Tires and inner tubes	35,379	90	275
TOTAL	277,712	26	1,425

Source: Iranian import statistics supplied by Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce, from official Iranian reports. Conversion of rials to £P figured at 80.5 rials to a £P, the average rate for the year. The assumptions as to productivity implicit in employment estimate same as in Table 24.

TABLE 30: IRAQI IMPORTS OF SPECIFIED MANUFACTURES IN 1938, PERCENTAGE REPLACEABLE BY PALESTINIAN IMPORTS IN 1954, AND ESTIMATED NUMBER OF EMPLOYEES

Commodity or industry	*Iraqi imports in 1938 (Thousand dinar)*	*Percentage that may be replaceable by imports from Palestine (Percent)*	*Estimated number of employees (Persons)*
Boilers, machinery, apparatus, appliances, including parts thereof	613	15	375
Cotton piece goods	1,069	10	225
Artificial silk piece goods	529	25	300
Clothing, including underwear	374	25	300
Chemical and pharmaceutical products	197	40	175
Motor spirits and fuel oil	160	100	25
Soap	96	50	150
Rubber and articles made of rubber	98	75	75
TOTAL	3,136	25	1,625

Source: Iraqi import statistics supplied by Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce from official Iraqi sources. Iraqi dinar and £P both are tied to the pound sterling. The assumptions as to productivity implicit in employment estimate same as in Table 24.

These calculations assume that the postwar level of imports will not exceed the prewar level. There will be two general factors operating to raise this level: the increase in population and the increase in per capita consumption. The economic importance of both to Palestine, however, can be easily exaggerated. Much the larger part of their populations is comprised of poverty-stricken peasants who even after some improvement in economic status, which is bound to be small in the next 10 years, will remain too impoverished to be purchasers of Palestine's luxury and semi-luxury products. Palestine is dependent rather on the urban populations of these countries. Their newly acquired riches of the war years will not be quickly dissipated, and some of it undoubtedly will find productive outlets, thus raising the per capita income of the urban population, possibly attracting some of the villagers to the cities and enabling others to emerge into the middle class stratum. However, no very substantial shift in the occupational and social structure of the Middle East population is anticipated during the forthcoming decade; the economic basis for this seems to be lacking. Such shifts as are likely to occur probably will result in a larger volume of imports of the type Palestine will be able to manufacture economically. The effect of this prospect on employment can be taken into account by adding 10 percent to the estimate based on prewar imports. On this basis Palestinian exports to the Middle East in 1954 are estimated to provide employment for 9,900 persons.

Thus far, on the assumption of no postwar immigration there are the following potentialities expressed in terms of the probable Jewish employment opportunities in 1954:

Highly localized market-oriented industries	11,700
Other market-oriented industries based on imported materials:	
Replacement of prewar imports to Palestine	15,000
Continued development of prewar Palestinian manufacture	15,000
Palestinian exports to Middle East markets	9,900
TOTAL	51,600

SOME QUALITATIVE CONSIDERATIONS

Tables 23 through 30 are an approximate representation of our judgments in statistical terms. To appraise the character of these judgments, however, it is necessary to give some indication of the reasons that underlie them, particularly the industries listed in Table 24 which forms the point of departure for the following discussion. In some instances, this can be done most profitably by groups of industries.

The processed foods and beverages will not be imported in anything like their prewar volume because of very considerable improvement in quality resulting from additional experience and because of consumer habituation to local products after the cessation of imports. This has been especially true of candies, marmalades, cheese, beer, liqueurs and brandy. Imports will be restricted to the demands of the highly discriminating or to those among the non-Palestinian population who insist on brands from their homelands.

The case for Palestine's milling all of its wheat flour requirements, which consist to a significant extent of imported wheat, rests largely on the rising demand of the dairy industry for the bran and on the assumption that a highly mechanized mill will be erected in the Haifa Port area and so located that the wheat can be transferred mechanically from ships to silos.

Before World War II, asphalt was not produced locally in the absence of rich natural deposits. With the construction of the oil refinery it became possible to produce asphalt as a by-product of the refining process. Imports will not be competitive since transportation is relatively costly for such a bulky commodity and because of the superior quality of the local product, which by virtue of a patented process can be applied without the use of heat.

Although the cement industry had been well established prior to the war, it had not achieved a scale of operations that precluded the necessity of imports. Wartime demands resulted in an expansion of monthly production from 9,000 metric tons to 21,000. The annual production of this enlarged capacity would equal four times the volume of the prewar imports. Moreover, it should not be a costly production since much of the cost of the additional plant must have been depreciated by sales to the military.

On the assumption that plate and window glass will not be sold in Palestine and other Middle East countries at "dumped prices" as it was in the prewar years, the Palestinian industry, which was revived during the war, will continue to compete successfully against foreign competition. To date this is the only factory of its kind in the Middle East. The wartime experience has provided a well-trained staff. With the return of peacetime conditions, the cost of hauling sand either from Syria or the Beersheba district should be drastically reduced and high quality fire bricks, which will permit fuller utilization of furnaces, will again be available. Modernization of plant, such as more complete utilization of automatic devices and introduction of mechanical transport within the plant, would further reduce unit costs. Even with a doubling of present capacity the demands of the area are such as to assure operations at full capacity with the concomitant reduction in unit overhead costs. Prewar imported glass was subject to breakage in transit of 15 percent of total value, which in itself provides a large margin to local production. For still another reason dealers prefer local production. Since deliveries from the factory can be made in 24 to 48 hours compared with several weeks from continental suppliers, dealers will be able to carry much smaller inventories. The same consideration would also be an advantage to dealers in other Middle East countries, the major cities of which can be reached within 2 days.

Generally containers, including those made from glass, are produced near the place of their use in order to reduce costly transportation and, in the case of glass, expensive packaging. In the prewar years Palestine imported empty glass containers because the size of the local market could not support a factory of the minimum technical capacity. With the local production of many of the consumers goods requiring glass containers, Palestinian industry will constitute a market of the minimum size, at least for the more standard shapes and sizes. This assumes that manufacture by semi-automatic machinery will continue to be competitive as it was prewar, with the manufacture by completely automatic machinery. Also absent in the prewar years were management and labor experienced in handling glass manufactures. This deficiency has not been eliminated. While Palestine should be able to count on the market in Syria and Lebanon, the Egyptian market will be reserved for its own plant which initiated successful operations during the war years.

For other glassware, especially hollow ware, the location of the market provides the best place for production because of the transportation advantage mentioned above. For the more conventional types of products, Palestine and her neighbors should provide a sufficiently large plant to support one factory.

Building materials and heavy building equipment, such as the sanitary installations, also tend to be market oriented. Their heavy weight and low value make for relatively expensive transportation. In some instances, such as tiles for paving and walls, this consideration is reinforced by the ubiquity of basic materials. In the case of the sanitary installations it is cheaper to import the metal base in the form of ingots and complete the fabrication of the product than to import the finished product—again if dumping is prohibited.

To this reason must be added one other in discussing the other metal products, particularly those made from iron. The availability of raw materials in the form of scrap metals is a determining factor. That is, a combination of market and raw material attractions comes into play, whereas in the manufacture of machines, machinery parts, implements and instruments the combination is composed of market and labor factors. For the machinery group of products the highly skilled workers would be the attraction rather than low wages, while the advantage of the market location would be not only a transportation advantage, as in such articles as boilers, but also ease of communication with the purchaser for such machinery and equipment as is specifically and uniquely designed.

Under our assumptions there would appear to be little opportunity for the manufacture or sub-assembly of electrical equipment or appliances in Palestine. In our view the Middle East market will not be large enough to support factories or assembly plants of the technical minimum size. In Palestine the development of this industry has been retarded by the policy of the Palestine Electric Company, which is opposed to granting lower rates to residential users in order to promote the wider use of electrical appliances. Electical pumps, however, would be an exception to this general observation. Because of the importance to Palestine's agricultural economy of irrigation from wells, the market for pumps is sufficiently large to justify local production. For the other articles of this group, efficient operations can be achieved in small factories suitable to Palestine's limited markets.

The manufacture of plywood and veneer would be based on imported logs. If the manufacturing process were "weight-losing," i.e., involved considerable waste, the industry would not be market oriented. In Palestine, however, the industry would be carried on so as to utilize the waste wood to manufacture crates and baskets for farm produce. Hence the process would not be weight-losing. In the case of custom-built furniture, location at the market is indispensable, and for the cheaper variety of ready-made furniture there would be a transportation advantage since most pieces of furniture are bulky in shipment.

Textiles cannot be discussed without reference to the end products. The piece goods are made up into a variety of dress articles both for women and men, as well as articles for household use and of a handicraft character. Quality products in all these lines require a sense of design and styling. Jewish personnel traditionally has been important in style branches of the textile and clothing industry. Many, formerly engaged in these industries in the European style centers, are now engaged in these same industries in Palestine. It is an industry in which skill and talent are as important as accessibility to the market.

Quality in the finished product, however, requires quality production in all the intermediate stages, from the yarn, weaving or knitting, to the dyeing, finishing and printing. To control the intermediate processing, there must be frequent contact between the manufacturer of the final product and the intermediate processor, and this in turn requires proximity of location.

Moreover, no serious disadvantages would seem to adhere to a spinning, weaving, and knitting industry in Palestine, with the possible exception of woolen fabrics. In the case of cotton and silk the raw fibres are available in neighboring countries and rayon filament was formerly supplied by Italy. Arrangements have already been made to receive nylon from the United States. A nuclear staff has been trained in European textile centers, and all reports indicate that new workers are readily trained; the Yemenite women particularly are noted for their aptitude in operations requiring manual dexterity. If modern machinery is installed, productivity should be equal to that of older textile centers producing the same quality of cloth. Certainly the climate is no more adverse than in most European centers. It should be emphasized that the continued development of the textile industry presupposes that there will be no recurrence of the prewar dumping, most of which originated with Japan.

The spinning and weaving of wool, but especially spinning, offers fewer possibilities than the processing of other fibres. Thus far the wool of the region is too coarse for clothing although suitable for rug making. The skills required for quality production are of a higher order than in the other textile branches and are not so readily acquired. The fashion goods using woolen cloth probably must rely on imported cloth, or in the case of the knitted goods on imported yarns.

It is also unlikely that Palestine could develop a mechanical print cloth industry. In this instance the size of market rather than knowledge of techniques would be the limiting factor. To be economical, it is necessary to print each pattern in large volume. The regional market could not absorb large quantities, and it would not be sufficiently cheap to compete in overseas markets. No such strictures apply to the semi-mechanical process of screen printing which already has reached an advanced stage of development in Palestine.

Style goods embrace more than wearing apparel. Fabrics used in interior decorations—upholstery coverings, curtains, draperies and spreads—are also part of this category. Quality products of this character cannot be manufactured on a large scale and accordingly are eminently suitable for Palestine. It is a branch of textiles that should continue to flourish.

Much less of the prewar shoe imports will be replaced by local production, compared with the probable replacement of imported textiles. At the present time the most advanced part of the shoe industry is technically very backward, which cannot be said of the textile industry. Most of the machinery is a miscellaneous assortment purchased originally at second-hand, and has been obsolescent for many years. Many operations for which machines have been designed are still done by hand. Even after complete rationalization it is unlikely that the Palestinian industry could compete in the cheaper grades with such low-cost producers as Bata, which company has been interested in the Middle East and operates over 20 retail stores in Palestine. Possibly with modernization of equipment and plant the Palestinian industry would be able to compete in the better quality grades and in fancy women's wear, all of which command higher prices.

In other leather goods such as gloves, women's handbags, brief cases, belts and other accessories, Palestinian industry has achieved quality production and will be able to meet postwar competition both in Palestine and in the Middle East. This will be possible in large part because of the important advances made by the local tanning industry. Once the industry is able to re-equip and purchase some of the necessary chemicals abroad, most of the leather to be processed in Palestine can be imported as raw hides. For the fancy leather goods, the tanning industry bears the same relation to the leather manufacturer as the dyeing and finishing plants bear to the clothing manufacturer. There must be frequent contact, hence proximity.

Potassic fertilizers may more appropriately be discussed with other Palestinian commodities dependent on overseas markets. Phosphatic fertilizers were produced in Palestine for the first time during the war in quantities sufficient to supply Palestine, Cyprus, Syria, and Lebanon. The production has been based on the phosphate rock deposits of Transjordan, near Amman, alongside the Hedjaz railroad. The exorbitant cost of this production during wartime was attributable to the highly monopolistic price charged by the Transjordan owners for the phosphate rock and to a lesser extent to an uneconomic location of the plant, which should be in the Haifa area instead of the Tel Aviv area, to minimize transportation costs. Both disadvantages will be corrected: one by the actual or threatened import of phosphate from North Africa, and the other by relocation. Although Egypt manufactures its own phosphate fertilizers, the market in the remainder of the Middle East is sufficient to absorb the output of a plant of the minimum size.

A key industry for the production of fertilizers and many other chemicals is the manufacture of sulphuric acid. As a wartime accommodation, the Consolidated Refinery has produced more than its own requirements from sulphur imported from the Gulf of Mexico. Several interests are jockeying for position to be the first to erect a sulphuric acid plant to supply the demand for all industries other than the Consolidated Refineries. There are several possible sources of sulphur; the pyrites of Cyprus, Sicilian sulphur, or the United States sulphur from the Gulf of Mexico. It is still moot whether the sulphur deposits at Gaza will be usable. With a fertilizer industry as chief consumer, the absorption of the output of a plant of minimum size would be assured. Regardless of the source of sulphur there seems to be little doubt that the acid would be available at a reasonable price.

"Other chemicals" comprise a miscellany of which only one important group, the bichromates, is selected for special comment. This is another "war baby" based on the chrome ore of Turkey, which in peacetime could be transported to Haifa very cheaply in the native sloops. The present manufacturers not only have acquired the "know-how" from their wartime experience, but also a completely amortized plant. The requirements of the tanning industry of the Middle East are about equal to the production of a plant of minimum capacity, about 2,000 tons per year.

During the war years, the drug industry has added appreciably to its good will among physicians in Palestine and the Middle East, and much of it will be retained after the war. In the field of drugs prescribed by physicians, the Palestinian industry has several advantages over suppliers outside the region. Certain diseases and ailments are endemic to the area. Palestine, as the medical center of the Middle East, carries on the research directed toward their abatement or elimination, and the drug industry either participates in or is in contact with this research. Other drugs frequently need to be adapted to the special characteristics of the Middle East climate. The relative ease of filling special orders is also a decided advantage. Even if the Palestinian industry possesses technical advantages in the production of proprietary drugs and medicines, which is doubtful, they would be offset by its backwardness in the arts of packaging, advertising and salesmanship, although even here some advances have been registered.

Progress in these arts has been more pronounced in the manufacture and distribution of cosmetics and dentifrices. The more attractive containers, plus the good will earned by the more responsible manufacturers, should enable the industry to retain a good share of the home and regional market. This should be especially true for the products of medium quality and price. The cheap products cannot be produced cheaply enough, while only well-known brands from abroad can compete in the high-priced class. Certain of these products, however, for maximum serviceability must be adapted because of climatic differences. It is very possible that foreign manufacturers may find it profitable to enter into partnership with local manufacturers who could perform the function of adaptation to the Middle East market.

Paints are another branch of the chemical industry that expanded during the war and, by virtue of the experience and headstart, are well entrenched. The transportation advantage over imported paints enjoyed by the local industry was offset in the past by high cost of containers in Palestine. Now that the local manufacture of cans is a virtual certainty, the full benefit of the transportation advantage will be achieved. In at least one instance a foreign manufacturer has tried to diminish this advantage by entering into a partnership with a local company which would receive the basic paint mixtures in concentrated form and in large drums for final processing and distribution in retail packages. Such a development, it should be noted, shifts some of the processing, hence employment, to Palestine. The local industry, however, has not been able to develop quality nitrocellulose paints at an economical price. If the requisite chemicals become available locally as a result of utilizing the by-products of petroleum, this branch of the industry may be able to take hold. In the meantime the chief importer of this type of paints probably will utilize the arrangement mentioned above.

To date, the manufacturers of rubber products in Palestine have made all types of articles with the important exception of automobile tires and tubes. The fact that the local industry's experience has been restricted to the use of reclaimed rubber should not be depreciated since these articles even in peacetime are made with a relatively large admixture of scrap rubber. Because of the experience gained and the local supply of scrap rubber, this industry should remain competitive.

In our view it should be also economical to manufacture tires and tubes in Palestine sometime before the conclusion of the first postwar decade on the assumption that these tires would not be barred from competing on all the Middle East markets. At the outbreak of war about 75,000 motor vehicles were licensed in the region. It is possible that within the first half of the decade the number will be doubled in view of the increased wealth of the area and the substantial extension of the road network. In such an event the market would easily absorb 200,000 tires annually, which is regarded as the output of a plant of the minimum capacity compatible with efficient operations. Palestine is not disadvantageously located for the economical procurement of the crude rubber and other required materials. Probably it could be accomplished only in partnership with an experienced tire manufacturer in the United States or Great Britain who could contribute the technical know-how and possibly some capital. In recent years much smaller plants than the one specified here have been erected in Cuba and several South American countries, but it is very doubtful whether they will be able to survive the resumption of competition without very high protective tariffs.

The used personal effects consisted of the clothing and household goods that the immigrants brought with themselves. If they had not been imported in this manner, it would have been necessary to purchase them in Palestine, and as they wear out it is necessary to replace them. We estimate that about half of such items will be supplied by local manufacturers.

EMPLOYMENT OPPORTUNITIES IN MANUFACTURES

Assuming No Immigration

Before striking a grand total it is necessary to take into account certain other possibilities thus far ignored in our calculations. Certain manufactures may be regarded as complementary or servicing other industries. In the prewar period, for example, when Palestine imported cans of paint, it imported not only paint, but cans and printing on the cans. If Palestine replaces much of its previously imported package goods with local manufactures—and this we believe to be possible—it will be able to support a containers industry (tin cans, paper boxes of all sorts, and bottles and other glass containers) and will add appreciably to the job printing industry. Such industries might very well have clients in the neighboring countries.

Much the same applies to the import of textile piece goods and clothing. Such articles also involve importation of the product of dyeing and finishing, and textile printing industries. These same industries, of course, are also represented in the exports of Palestinian textiles and clothing. These ancillary textile industries are already well established, and the leading firms have achieved product standards of high quality. Their present growth beyond prewar levels and continued expansion also have not been allowed for. This industry too probably will serve the quality production of the neighboring countries. One instance may suffice to illustrate this possibility. Prior to the war, the manufacturers of silk piece goods in Lebanon and Syria sold their product as gray goods to French dealers who arranged for the dyeing, finishing and printing in France, mainly in the Lyons district. It will be to the advantage of the Lebanese and Syrian manufacturers, without losing title to the cloth, to have it finished and printed in Palestine and then sold by the manufacturer as a finished product. Such arrangements, in fact, have already passed the experimental stage.

Insufficient weight also has been given to such nondescript industries as foundries and machine shops which are largely engaged in the maintenance of equipment and plant. The effect of the projected general expansion of industry on this branch will be greater than that indicated by an extrapolation of a prewar base by population growth.

For all these complementary or service industries, we allow about 3,000 jobs.

In our view this analysis exhausts the major developmental possibilities of Palestinian manufacturers, assuming no immigration and within the framework of our assumptions. We are now in a position to reach a grand total:

Number of jobs required for:	
Production for Palestinian market	41,700
Palestinian exports to middle East	9,000
Palestinian exports to overseas markets	9,900
Production by complementary industries	3,000
TOTAL	63,600

In the past, during peacetime, about 40 percent of the total Jewish population has been gainfully occupied; in wartime the percentage has been closer to 42, counting half of Palestine's military volunteers as normally in the labor force. Under conditions approximating full employment about 41 percent of the estimated population of 1954, assuming no postwar immigration, could be counted in the Jewish labor force of that year. On this basis there would be 269,000 persons in the labor force and according to our estimate of 64,000 jobs in manufactures, 23.5 percent of the labor force would be absorbed in industry. This is to be compared with 17 percent in 1939 and 25.6 percent in 1943.* The latter percentage was reached at a time when the manpower shortage was so acute that there was a considerable loss of individual incentive on the part of workers because of the very firm assurance of job tenure.

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*Adaptation of Jewish Agency figures. See Chapter 15. Adaptation is necessitated by the fact that Jewish Agency uses a wider definition of manufactures than is conventional; this wide definition includes the electric utilities and certain service trades.

Assuming Mass Immigration

At this point it is necessary to relax our assumption excluding postwar immigration and to evaluate anew the potentialities of employment in manufactures after a decade of mass immigration. More particularly, we shall consider the effect on job opportunities in manufactures of a volume of immigration varying from an average of 3 to 5 percent of the total resident population in each year of the decade, with Jews constituting 90 percent of the total immigrants. These represent our minimum and maximum assumptions with respect to immigration.

On the basis of the minimum assumption the total Jewish population in 1954 would be 1,298,000, with immigrants numbering 616,000. The necessity to feed, clothe, and house these additional people will affect the volume of employment in those manufacturing industries producing for the home market. With the same per capita consumption as the non-immigrant population, the total volume of consumption would be nearly double that assumed for the non-immigrant population alone. As we have seen, local production for the latter population requires about 43,000 jobs.* However, due to economies resulting from larger scale of operations, job requirements would not double. The exact magnitude of these economies cannot be indicated. Perhaps the job opportunities in this sector of manufactures might be increased by 80 percent, in which case persons employed would number about 77,000.

Such a relatively large increase in population, however, would set into operation certain offsetting factors in terms of employment in manufactures. For example, articles that have been imported because the market could not support a factory of the technical minimum size, may now be manufactured locally with the doubling of the market. Branch assembly plants for the assembling of electrical apparatus may well fall into this category.

Building materials industries would also receive a very strong stimulus from this sizable increment in population. Under our previous population assumption it was implicitly concluded that the building backlog would have been liquidated by the end of the decade and that building operations would have returned to "normal." With any significant volume of immigration the latter assumption is no longer tenable. If a disastrous inflation is to be avoided, the building industry must be restrained, resulting in a construction backlog that will extend for several years beyond our reference period. Thus the demands for building materials locally fabricated will be proportionately greater than allowed for in our extrapolations.

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*41,700 for production for Palestinian market plus half of the 3,000 in production by complementary industries.

Another implicit assumption must also be altered—the one relating to purchases of Jewish manufactures by Palestinian Arabs. The immigration of the assumed number would be possible only if a significant part of Arab agriculture is converted from extensive to intensive cultivation. The latter entails the purchase of water pumps, irrigation pipes, sprinklers, water meters, fertilizers, and agricultural implements. Much of these could be produced by Jewish manufactures. A sharp departure from the prewar pattern of consumption with respect to these commodities had not been included in our previous extrapolation.

Considerations such as these might very well cause in fact at least a doubling of jobs concerned with production for the local market. That is, instead of 77,000 jobs there would be a minimum of 86,000.

The impact of immigration on Palestine's export industries is, of course, much more indirect, but it should nonetheless have an expansionist effect, especially on the exports to the Middle East. In the first place, the reduction in unit costs originating in the larger scale of operation should lead to an expansion of exports. Secondly, the new industries that would be established by the enlargement of the local market very probably could also be exported to the Middle East countries. It is conceivable under the circumstances that the 10,000 jobs engaged in producing for Middle East exports* might be expanded to 15,000.

Even more remote would be the effect of immigration on employment in industries based on overseas markets. The effect of reduced unit costs in style goods, handicrafts and citrus concentrates and by-products might add another 1,000 jobs to this group.

Thus the 63,600 estimated jobs without postwar immigration would be expanded to about 112,000, according to our analysis of the effect of the assumed immigration of 616,000 persons in 10 years. The total Jewish population of 1,298,000 would have a labor force of 532,000, on the assumption of 41 percent of the population employed or seeking work. Our estimate means that 21 percent of this labor force would be employed in manufactures. The comparable prewar percentage was 17.

The procedure and factors of estimation are much the same regardless of the volume of immigration assumed. Within our range of assumptions, the larger the volume of immigration, the smaller will be the percentage of the labor force engaged in manufactures.

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* The 9,000 stated on p. 527 plus 1,000 in the complementary industries.

Under our maximum immigration assumption, the Jewish population would number 1,826,000, of which 1,125,000 would be immigrants. That is, the population would exceed by 40 percent the estimated population under our minimum immigration assumption. Of all the factors previously mentioned, the demand for building materials locally produced would probably expand in greater proportion than the population increase. The 86,000 jobs required to produce for the domestic market under the circumstances might very well be expanded by 35 percent, thus engaging about 116,000 persons. For reasons already stated, employment for production destined for Middle East and overseas markets also could reasonably be expected to increase from 26,000 to, say, 30,000, a rise of 15 percent.

The assumed population would involve a labor force of 750,000, again assuming that 41 percent of the population would be employed or seeking work. Our estimate of 146,000 jobs in manufactures would imply that 19.5 percent of the labor force would derive their livelihood from manufactures, compared with 17 percent in 1939.

We reach this result by following assumptions that are, on the whole, conservative. A possible exception is our political assumption of peace between Jew and Arab. For example, no account whatever has been taken of several employment-creating possibilities that will have their origin in British imperial policy. The British troops formerly garrisoned in Egypt may very well be based in Palestine hereafter. (The large number of military camps with permanent installations that have been and are still being constructed in Palestine may be regarded as straws in the wind.) There is also a real possibility that the Haifa port may continue to be used as a secondary naval base by the British. Both could be a source of appreciable purchasing power for the products of Jewish industry.

One other type of contingency warrants mention. Among the prospective immigrants there may be a handful with unusual talents or skills about whom new industries could be organized—much as Professor Goldberg's knowledge of optics is being utilized. Such contingencies defy any calculating approach, yet they may be of great importance. On the other hand, we must warn against the bland assumption—so common among Palestinian Zionists—that the unknown can be confidently entered into any Palestinian balance as a large plus-factor. This confidence in an inherent "ameliorative trend of events" has been urged upon us by many Palestinians, who euphemistically call it "the dynamic approach."

This doctrine of "fortuitous necessity" can find superficial support in Palestine's development of the past decade. The tragedy visited upon European Jewry by Hitler, which was not foreseen, has redounded to the economic advantage of Palestine. Nevertheless, logic supports the position that what cannot be foreseen may be favorable or unfavorable. The so-called "dynamic" approach would have us state that our estimate is subject only to a positive error. We believe rather that our error of estimate may be in either direction.

CAPITAL REQUIREMENTS

The obverse aspect of the demand for labor is the volume of capital that must be invested to make possible the estimated expansion under the conditions posited. Suggestive data on this score are provided by the various census materials. Perhaps the most useful is the census of Jewish industry taken by the Jewish Agency as of 1942-43. The composition of the manufactures aggregate in that year would approximate the composition of manufactures at the end of the first postwar decade more closely than the prewar composition. The fuller utilization of plant and equipment during the war years also represents a closer approximation to the expected postwar situation. According to this census, capital, including the value of land and buildings, amounted to £P 350 per person engaged in manufactures.

Obviously this sum must be corrected for probable price changes in capital goods in the course of the first postwar decade as well as for an increase in real capital per worker required to make Palestine's industry competitive. On the former point it appears at first that prewar prices cannot serve as a complete guide since much of the equipment was purchased at considerable discount from market prices through the "transfer" arrangements with Germany and Poland. They might, nonetheless, be a helpful guide in establishing a lower range. In 1937, the comparable figure was £P 275. This reflects several factors operating in opposite directions. Since industry was not operating at or near capacity level in that year, the figure is higher than it should be according to our assumption. On the other hand, the acquisition of much of the machinery through "transfer" and the fact that capital-using industries were less important in the prewar period both tend to make the capital investment per person engaged less than it should be. It may not be far wrong to conclude that these factors are exactly compensating and that the "true" investment prewar was in fact £P 275 per person engaged.

On this basis, investment per person during the war would have increased by 27 percent over the prewar figure. This is only slightly higher than the price rise for machinery in the United States, which probably will be the chief supplier of machinery to Palestine in the postwar period. Moreover, informed persons in the machinery trade believe that in the foreseeable future machinery prices in the United States will remain at the wartime level. However, since the pound Palestinian has been depreciated vis-a-vis the dollar by 20 percent, United States machinery in Palestinian pounds will have risen by 50 percent.

The second consideration, the increase in real capital per worker, must be dealt with in a very arbitrary manner in the absence of specific data. We shall assume simply that real capital per worker must be increased by 10 percent. Thus at prewar prices each person engaged in manufactures would be provided with £P 302.5 of capital (£P 275 plus 10 percent).

It is assumed that in 1954 construction costs, which have represented one-fifth of capital investment, would also rise 50 percent above prewar construction costs, identical with the rise in machinery costs. Thus the composite rise in the value of capital would also be 50 percent. On this basis the value of capital investment per employee would be about £P 450. On our assumption of minimum immigration, 112,000 persons would be employed in manufactures. This would entail a capital investment in 1954 valued at £P 50 million. Our assumption of maximum immigration results in an estimated employment of 146,000 persons requiring capital funds in 1954 valued at £P 65 million.

Obviously not the entire sum must be invested anew. The Census of Jewish Manufactures reported the capital investment at some £P 15 million, presumably valued partly at prewar and partly at wartime prices. If these capital goods are maintained intact through the accumulation and use of adequate depreciation reserves, it would be necessary to have additional capital investment valued in 1954 at £P 35 to £P 50 million, depending on the volume of immigration.

ARAB MANUFACTURES IN THE FIRST POSTWAR DECADE

If our analysis is correct, the expansion of Jewish owned manufactures—while involving some shift in the Jewish occupational structure in favor of manufacturing (as compared to prewar)—will not outrun the supply of Jewish workers. On our maximum immigration assumption, the projected expansion in Jewish manufactures will not compensate fully for the decline in the role of agriculture foreseen in the preceding chapter. Thus by the end of the first postwar decade there will have been little economic pressure leading to absorption of Arab workers in Jewish manufacturing enterprises. Further participation of Arab workers in factory employment will depend then on the initiative of Arab entrepreneurs or foreign interests. We are concerned not only with the postwar prospects for further expansion and diversification of Arab industry but also with the extent to which it might impinge upon the growth of Jewish industry.

For the most part, Arab factory industry has been restricted to the expansion of handicraft or home industries. For the postwar years, the leaders of the Arab mercantile class, who also serve as the industrial entrepreneurs, continue to think along the same tradition-bound lines. The relatively large accumulation of wealth in the hands of the merchants during the war years has stimulated their interest in manufacturing undertakings as investment outlets. Their thoughts, however, remain rooted to the traditional industries—textiles, soap and refining of olive oil—with the difference limited to the replacement of hand processes by machinery. Breaking away from the traditional paths probably will be a slow process since organizing ability seems as yet to be rare; engineers, skilled technicians and trained workers are few, and even more scarce are training facilities either in Palestine or in neighboring countries. Part of these difficulties may be overcome by hiring key technical personnel from abroad, particularly from central Europe. Even in the latter event, all except slow progress will meet with serious difficulties.

The modernization of the Arab textile industry, of all the traditional branches of Arab industry, seems the most promising. The use of spinning machinery and power looms was introduced during the war, and the industry thereby gained valuable experience as well as profits. Key personnel, moreover, can be trained in a textile school in Egypt. To meet the major demands of the Arab consumers, only cheap textiles of low quality need be produced. There are many examples of peoples formerly unpracticed in the industrial arts who have produced successfully for this type of market. Aside from low quality, a prime requisite is very cheap labor. In the latter respect Moslem Arabs operate under somewhat of a disadvantage since there are strong tabus against the employment of women in factories. Despite this handicap, as far as the local market is concerned, Arab production, once it is mechanized will be cheaper than Jewish production because of a lower wage scale. Thus it appears quite evident that the Jewish-owned textile industry should not count on a local Arab market, except a very limited one for quality production. On the other hand, after some years of experience it is quite possible that the Arab-owned textile factories may be in a position to supply the low quality textiles of the Jewish market.

With the possible exceptions of cotton textiles and of tanneries processing inner sole leather, there does not seem to be any serious possibility of local Arab industry competing on the Jewish market. On the other hand, the traditional Arab industries, which have dominated the local Arab markets, will strengthen their hold on these markets through mechanization. Jewish industry has possibilities of increasing its sales to the Arab market only if this market demands non-traditional products such as household utensils and furniture and processed foods, which demand may be created by a slowly rising standard of living.

Palestinian Arabs conceivably could be absorbed into manufactures by foreign entrepreneurs operating branch plants in Palestine and employing mixed personnel or exclusively Arabic workers. In the past this has happened to a limited extent. The former type of enterprise is exemplified by the Consolidated Refineries and the latter by the cigarette factory of Karaman, Dick and Salti, which is controlled by British-American tobacco interests and managed by British personnel. The future possibilities of this type of expansion also appear to be very limited, particularly the type based on the exclusive employment of Arabs. Since the driving force in these instances is the desire to obtain cheap labor, the prospective entrepreneur would do better to locate in Egypt or Syria, where the Arab wage scale is even lower than in Palestine and where the workers are no more unskilled.

For all these reasons Arab manufactures will not be in a position to play a large role in any transformation of the Arab occupational structure that may take place in the next decade.

SUMMARY

1. While the transition from war to peace is fraught with some major difficulties, they are not insurmountable and very probably will be offset by equally significant factors. Some of the factors, such as the availability of materials, are beyond the control of the Palestinian community. Others, however, require the application of a moderate degree of intelligence and good will which are regarded as not beyond the resources of the community. If the latter are forthcoming, Palestine manufactures, on balance, far from being crippled or overwhelmed, should emerge in a relatively sound condition on which further expansion can be based.

With respect to Jewish-owned manufactures, we envisage expansion of employment in industries producing for overseas markets as well as those producing for the domestic and regional markets.

2. The export industries which give most promise of significant development derive their comparative advantage either from locally produced raw materials or from highly specialized skills. In the former category are citrus concentrates and the Dead Sea chemicals of potash and bromine. With the demise of the German controlled potash syndicate, it is reasonable to expect that Palestine will supply all of the eastern Mediterranean and Middle East demand for potash, a demand that is destined to increase slowly during the next decade, and will participate in supplying the Far East, particularly Japan. In our view, the magnesium salts of the Dead Sea cannot be exploited economically on a large scale within the next decade.

The manufacturers of citrus concentrates, once they resolve their technical difficulties and rationalize their industry in order to exploit effectively the citrus by-products, will be able to deliver a cheap concentrate to the vitamin-starved populations of Great Britain and the European continent, particularly to those in the lower income groups. The industry's development will be limited by the size of the non-exportable citrus crop. The latter is estimated at 145,000 tons in 1954 or 3 times the quantity of citrus fruit consumed commercially during the war years.

The export industries based on highly specialized skills include cut and polished diamonds, style goods, handicraft and art goods, artificial teeth, medical instruments and apparatus, optical measuring instruments, and apparatus made largely of glass.

3. Palestinian manufactures, building upon their protected experience of the war years, will expand to the point where they will replace many manufactured articles formerly imported. This development assumes a sympathetic attitude on the part of Government, which would be reflected in anti-dumping tariffs, entry of raw materials and semi-processed goods free of duty, and temporary protection to highly selected industries by tariffs or direct subsidy. The replacement of imports will be most substantial in the case of finished consumers' goods ranging from processed foods and clothing to cosmetics and drugs. The replacement of semi- or fully-processed producers' goods will be more limited. Our analysis suggests, for example, that custom-built machinery and equipment and certain of the heavy chemicals, such as sulphuric acid, can be produced locally. The possibility of supplying the domestic

market with locally produced goods arises from the fact that, for articles requiring a variety of raw and semi-processed materials, the market forms an economical point for the assembly of materials and their further processing, provided the local labor force is skilled in the use of modern industrial techniques.

4. Since the knowledge of these techniques is not widely prevalent in the other countries of the Middle East, their imports of this same range of commodities, formerly from the West, could be supplied in the next decade by Palestine if economic considerations should be the controlling ones. Any such development assumes, therefore, that the political settlement of the Palestine problem permitting mass immigration will result within a few years in peaceable relations between the Jews and Arabs both in Palestine and in neighboring countries.

5. If our assumptions are satisfied, it seems reasonable that with minimum immigration of 616,000 in the course of the next decade, 21 percent of the Jewish labor force would be employed in manufactures by 1954, compared with 17 percent in 1939. Under our maximum immigration assumption of 1,125,000, our analysis indicates that 19.5 percent of the labor force would be employed by the end of the decade. This estimate is predicated, moreover, on the conservative assumption that the per capita income of the Jews will approximate its prewar level and that the Arabs will have a slowly rising per capita income.

6. To achieve this volume of employment, we estimate that the value of capital required by 1954 would amount to £P 50 to £P 65 million, depending on the volume of immigration. New investment would involve as much as £P 35 to £P 50 million.

7. Arab-owned manufactures are expected to undergo a much more modest expansion. The major developments will probably consist of the mechanization of their present industries rather than bold ventures into industries foreign to their traditional experiences. The expansion would be of sufficient magnitude to contribute modestly to the greater urbanization of the Arabs, but the development would not reach such proportions as to impinge on the expansion of Jewish manufactures, with the possible exception of the cheaper textiles.

CHAPTER 26

HOUSING AND CONSTRUCTION IN THE NEXT DECADE

CONSTRUCTION REQUIREMENTS

The requirements for construction in the postwar decade have two distinct components: there are, first, the requirements for supplying the current backlog of construction, clearing the slums, providing for the natural increase of the resident population, and making up additional obsolescence as it occurs. This is no mean job in itself. Secondly, there are the requirements for supplying the buildings for an influex of new immigrants.

Housing Construction

Construction requirements for housing alone, without immigration and with varying degrees of immigration, are set forth in Table 31. These housing requirements estimates are based on the standard of 2 persons per room, which means that 4 persons would be living in each two-room apartment. Given existing differences in income and corresponding differences in housing accommodation, an *average* of two persons per room would mean that many families would be living three and four persons in a single room. In the urban slums, and in very poor or rapidly expanding rural areas, even five and six persons to a room are to be expected. It is therefore not a generous level of accommodation, by Western standards, that we are stipulating. Yet it is higher than Palestine has today and may be quite beyond the reach of the Arab population even after a decade of progress.

The first item in Table 31, elimination of backlog and slum clearance, is based on the most authoritative estimate available on the housing backlog. It was prepared by a central committee of Arabs and Jews under the chairmanship of the Controller of Heavy Industries. This estimate indicates that at the end of 1944 the housing backlog amounted to 93,130 rooms, and 44,000 rooms were needed for slum clearance, making a total of almost 140,000 rooms needed in Palestine at the end of 1944 in order to bring the density of housing down to 2 persons per room. Of the accumulated needs of 140,000 rooms, 90,000 are for Jews and

50,000 are for non-Jews. The slum clearance figure of 44,000 is evenly divided between Jews and non-Jews. The low figure for the Arab requirements unfortunately does not reflect a good condition in Arab housing but rather the modesty of the Arab spokesman in not putting forth "requirements" to make up deficiencies which Arab poverty regards as inevitable.

TABLE 31: ANNUAL HOUSING REQUIREMENTS IN PALESTINE IN THE POSTWAR DECADE

(In prewar prices)

	Assuming average net immigration[1] per year for 10 years of			
	0	*68,400*	*95,600*	*125,000*
Rooms required for				
Elimination of backlog and slum clearance	14,000	14,000	14,000	14,000
Jewish	9,000	9,000	9,000	9,000
Non-Jewish	5,000	5,000	5,000	5,000
Natural growth	24,500	24,500	24,500	24,500
Jewish	4,600	4,600	4,600	4,600
Non-Jewish	19,900	19,900	19,900	19,900
Obsolescence	12,000	13,500	13,800	14,100
Jewish	3,800	4,700	4,900	5,200
Non-Jewish	8,200	8,800	8,900	8,900
Immigration[2]		35,800	49,950	65,250
Jewish		32,100	44,750	58,500
Non-Jewish		3,700	5,200	6,750
Total rooms required for	50,500	87,800	102,250	117,850
Jews	17,400	50,400	63,250	77,300
Non-Jews	33,100	37,400	39,000	40,550
Total cost at £P 150 per room (in millions of £P)	7.6	13.2	15.3	17.7
Jews	2.6	7.6	9.5	11.6
Non-Jews	5.0	5.6	5.8	6.1
Total labor requirements at ¾ of a man-year per room	37,875	65,850	76,688	88,388
for Jewish construction	13,050	37,800	47,438	57,975
for non-Jewish construction	24,825	28,050	29,250	30,413

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[1] The immigration is divided as follows:

	68,400	95,600	125,000
Jews	61,600	86,000	112,500
Non-Jews	6,800	9,600	12,500

[2] Including allowances for the natural increase of the immigrants as follows:

	3,200	4,300	5,500
Jews	2,600	3,500	4,500
Non-Jews	600	800	1,000

The housing required to provide for the natural growth of the population was determined by dividing the average annual natural growth by two, and the same was done for immigration. Replacements for obsolete housing were set arbitrarily at a level of about 2 percent of the total amount of housing in existence each year. The resulting totals are inevitably extremely schematic, but they serve to indicate the rough order of the magnitudes involved.

As shown in the table, without any immigration into Palestine in the postwar decade, 50,500 additional rooms will be needed each year to meet the demands of the resident population. More than three-fifths of these will be needed for the non-Jewish population, mainly as a result of their very high rate of natural increase. On the assumption of a construction labor requirement of three-quarters of a man-year per room, a labor force of almost 38,000 persons would be required for housing alone. On the basis of prewar cost of £P 150 per room, these housing needs result in a total capital requirement of about £P 7.6 million per year. Jewish authorities generally regard the basis of £P 150 per room as too low. Plans devised by the staff of the Jewish Agency are based on £P 200. Yet we have used £P 150 throughout both for Jews and others. As in the case of the allowance of persons per room, it may be argued that this formula gives our calculations a downward bias in requirements for Jews and an upward bias in other requirements, when due allowance is made for income differentials.

Under our highest immigration assumption, and allowing for the natural increase of those immigrants, 118,000 rooms would be required each year for ten years to fill all the needs for housing of the immigrants and the resident population. More than two-thirds of these rooms would be for Jews. Almost £P 18,000,000 per year would be required and the labor force employed would equal 88,400 persons.

Non-Residential Construction

In the case of non-residential construction, it is more difficult to arrive at a reasonably accurate estimate. For the backlog of public construction, the Government's *Report of the Committee for Development and Welfare Services*, 1940, was available, but for the backlog of non-residential private construction there has been no adequate survey. The total backlog of non-residential construction is set forth in the table on page 553.

The Government's estimates, although minimum, are quite comprehensive. Although they originally referred to the backlog as of 1940, the figures can be taken as the current backlog since they include the value of site in each case (about 5 percent of the total value). Only one major adjustment was made in the figures; that was in the outlays required for education. The government assumes that universal education is impossible at present and seeks to provide school places only for those applicants who have been rejected in the past and to replace the most unsatisfactory accommodations. On the assumption that universal education for at least a few years is possible, the estimates for education outlays have been supplemented with an additional sum of £P 1,906,980. This figure was determined in the following manner:

In 1941 only 25 percent of the Moslem children of school age (5-15) attended school, as compared with 90 percent school attendance among Jewish school-age children. Among the total non-Jewish population the ratio was 31 percent. Since 31 percent of the total non-Jewish children 5 to 15 years of age attended school in 1941, for purposes of analysis it can be said that the average length of school attendance per child was 31 percent of 10 years, or 3 years. Setting as a standard an average of 6 years of education per school-age child, we double the percent and arrive at the figure of 178,560 students (62 percent x 288,000 school-age persons). From the 178,560 must be subtracted 28,560 students for the estimated school facilities already available. Thus a total of about 150,000 additional school places must be provided in order to achieve an average length of six years of schooling for the 1941 non-Jewish school-age population.

BACKLOG OF NON-RESIDENTIAL CONSTRUCTION

	Total	*Jews*	*Non-Jews*
Public construction	£P 8,151,276	2,979,589	5,171,687
Education	3,302,518	295,485 *	3,007,033
Health	329,550	111,500	218,050
Communications	1,270,208	635,104	635,104
Municipal schemes	1,474,000	1,050,000	424,000
Government schemes	1,775,000	887,500	887,500
Non-residential private construction	1,000,000	500,000	500,000
TOTAL	£P 9,151,276	3,479,589	5,671,687

Source: Adapted from the Government of Palestine, *Report of the Committee on Development and Welfare Services*, 1940. * Grants to the Jewish public school system were made at the rate of 26.74 percent of the amount allocated to the Arab system. The figure given in the original report was retained here.

The Government report indicates that the average cost for construction per school place is £P 17. Actually, the figure £P 17 per school place is a minimum; it is based on the assumption of 50 pupils to each teacher. Multiplying 150,000 school places by £P 17 each gives a total of £P 2,550,000. From this sum must be subtracted the outlays for elementary schools of £P 643,020, which are already included in the Government's report for extension of town schools, completion of existing village schools, and extension of village schools. Thus it was necessary to add £P 1,906,980 to the outlays suggested by the Government in order to bring the facilities available for non-Jewish education up to the level required for an average of six years for each school-age child.

It should be borne in mind that the total estimated outlay for education is still a minimum in all respects: it refers to the school age population in 1941, which would be higher in absolute terms at the present time; for new construction it assumes a pupil-teacher ratio of 50 to 1, which is much higher than the ratio of 38.8 already in existence; and for schools already in existence it does nothing about reducing the pupil-teacher ratio below 38.8.

In the case of education and health the separate outlays for Jews and non-Jews are designated; in outlays for municipal improvements over 70 percent have been allocated to the Jews; while in the case of communications and Government schemes, it was assumed that the benefits would accrue equally to Jews and non-Jews.

The determination of the backlog of non-residential private construction is much more of a problem. For lack of any detailed estimates, and having in mind the inadequate conditions in existing factories and workshops, offices, garages, shops, pharmacies, restaurants, and hotels, we have entered a token amount of £P 1 million arbitrarily, which is certainly a great understatement in view of all that is included. This figure is divided equally between Jews and non-Jews.

In the case of the non-residential construction required for a large-scale immigration, it was necessary to use a different method. The non-residential construction required per Jewish immigrant was derived from estimates made by Mr. N. L. Lifshitz of the Bizur Company. These rates are set forth below. Using Dr. Ludwig Gruenbaum's percentage of wage earners to total population of 43 percent, Mr. Lifshitz created an immigration unit of 10,000 immigrant wage earners, or 23,260 immigrants. The occupational distribution per immigration unit was determined by averaging Dr. Gruenbaum's figures for 1936 and his projections for 1954. On the basis of the occupational distribution, it was possible to determine the construction required per immigration unit and per individual immigrant. As shown in the table below, the total average outlay for non-residential construction per immigrant is equal to £P 48.450, as compared with our estimated average outlay for housing per immigrant of £P 75.

NON-RESIDENTIAL PRIVATE AND PUBLIC CONSTRUCTION REQUIRED FOR JEWISH IMMIGRATION

(*£P per person*)

TOTAL	48.450
Working places and business premises	28.063
Workrooms and offices	6.664
Factories and workshops	10.895
Garages and stations	1.290
Agricultural farm buildings	3.715
Shops and stalls	2.745
Pharmacies, restaurants, etc.	1.685
Hotels	1.069
Public buildings	10.347
Hospitals and nursing homes	4.155
Schools and kindergartens	2.728
Cultural and religious buildings	1.634
Social welfare institutions	.570
Municipal and administrative buildings	1.000
Slaughter houses	.260
Public works	10.040
Internal roads	1.516
Pavements	.768
Municipal water supply	2.445
Agricultural water supply *	2.311
Drainage, canalization and sewerage	3.000

Source: Derived from an unpublished memorandum of N. L. Lifshitz of Bizur, Ltd., Aug. 15, 1943. * Excluding irrigation. All prices prewar.

The outlays estimated per immigrant for each type of construction were determined in the following manner:

Working Places and Business Premises: It was determined that only 6,177 wage earners out of each 10,000 require workrooms or offices. Those employed in four of the occupations will require special working rooms as follows:

	Number of earners	*Percent requiring workrooms*	*Number of earners requiring workrooms*
Liberal professions	900	75%	675
Commerce	1,350	20%	270
Public and other services	1,300	50%	650
Building and industry	3,000	4%	120

It was assumed that the 1,715 earners requiring workrooms in the above occupations would be accommodated at the rate of 2½ persons to a working room and each room would cost £P 226. Thus for each immigration unit of 23,260 persons, a total of 686 rooms costing £P 155,000, or £P 6.664 per immigrant, would be required for workrooms and offices.

Factories and workshops would employ 2,200 of the 10,000 wage earners. Since 4 percent of them have been accounted for in the above item, only 2,112 require additional working rooms. According to the statistics of the Jewish Agency, the following square meters are required per worker in various branches of industry:

Textiles		*Foodstuffs*	
Sweaters	9–10	Jams and marmalade	15
Textiles	10–15	Chocolate	16
ATA	40	Cigarettes	12
Stockings	8	Pastries	20
Tricot	10–12	Biscuits	8
Cotton and wool	12	Gazoz	18
Printing	12	Oil	40
Dyeing	10	Noodles	14
		Margarine	15
Shoes		Beer	28
Shoes	6–7	Flour	100
Trees	12		

Taking an average of 20 square meters per worker and a cost of £P 6 per square meter, a total of £P 253,440, or £P 10.895 per immigrant, will be required for factories and workshops.

In transport work, account was taken of the area required for autobus garages and bus stations. It was estimated that 10 square meters were required per worker, which, at £P 6 per square meter, amounted to £P 60 per worker. Since there are assumed to be 500 workers in this category in each unit of 10,000 wage earners, the total cost of garages and stations is estimated at £P 30,000 or £P 1.290 per immigrant.

The cost of agricultural farm buildings was estimated at the rate of £P 80 per family, as reported by the Technical Department of the Jewish Agency. With 1,850 farm workers in each unit of 10,000 wage earners requiring working places and with approximately 1.7 farm workers in each family unit, 1,080 families require agricultural farm buildings at a cost of £P 86,400, or £P 3.715 per immigrant. Thus the 6,177 wage earners who require work rooms or offices out of each unit of 10,000 are accounted for.

The requirements for business premises other than the working rooms which have been accounted for above are based on the *Yearbook of the Tel Aviv Municipality* for 1937, as follows:

	Number of rooms		*Investment (£ P)*		
	In Tel Aviv in 1937	*Per immigration unit*	*Per room*	*Per immigration unit*	*Per capita*
Shops	1,952	284	200	56,800	2.745
Booths	607	88	80	7,040	
Pharmacies, restaurants, barber shops, laundries, etc.	675	98	400	39,200	1.685
Hotels	756*	110	226	24,860	1.069

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* Estimated.

Public Buildings: The estimated outlays in the Bizur study for hospitals and nursing homes include a variety of services. It is estimated that 1,000 inhabitants require 5 beds in general hospitals (at £P 450 each), 2 beds in hospitals for infectious diseases and tuberculosis (at £P 300 each), and one bed in hospitals for mental diseases (at £P 200 each). According to the Kupat Holim (Sick Fund), 2 rooms per 1,000 inhabitants are needed for dispensaries (at £P 300 each) while 29 rooms (at £P 300 each) would be required for general convalescent homes per immigration unit. The Social Welfare Department of the Tel Aviv Municipality estimated that 4 rooms (at £P 300 each) would be required for convalescent homes for chronic diseases and 7 rooms (at £P 250 each) for nursing and maternity homes. The total outlays for all these types of medical services come to £P 4.155 per immigrant.

The estimate for education outlays assumes that one out of 5 persons will attend school and that there will be an average of 33 children in each class; that the average cost per student amounts to £P 14.545 in the towns and to £P 9.696 in the villages. Assuming that two-thirds of the students live in towns and one-third in villages, £P 13.636 is taken as the average cost per student and the cost of education buildings comes to £P 63,450, or £P 2.728 per immigrant. This estimate appears to be too low. Actually in 1942 one out of every six persons in the Jewish population attended school which, on the basis of these figures, would allow £P 16.368 per average pupil (£P 2.728 x 6). As previously noted, even the Government allows £P 17 per pupil for non-Jewish schools with the minimum standard of 50 pupils to a teacher.

Cultural and religious buildings are estimated to be required to the extent of £P 38,000 for each immigration unit, as follows: cinemas, £P 10,000; large halls, £P 6,000; small halls, £P 3,000; clubs, £P 2,000; synagogues, £P 17,000. This results in a rate per person of £P 1.636.

Social welfare buildings in Tel Aviv are now provided at the very low rate of 440 mils per person. The Social Welfare Department estimates that the average required per immigrant for this purpose will be 570 mils. For municipal and administrative institutions in Tel Aviv, Hadera, Kfar Saba and Pardess Hanna, the outlays per person came to 890 mils. For immigrants this amount was increased to £P 1 in order to allow for the erection of administrative buildings for the Jewish Agency (and presumably other Jewish national institutions). The Tel Aviv Slaughter House cost about 240 mils per person, while in the colonies the cost of slaughter houses is estimated at 300 mils per person. The average per person was therefore set at 260 mils.

Public Works: The report of the Municipal Engineer of Tel Aviv for the year 1937-38 indicates that on the average 6.45 square meters of roads and 3.84 square meters of pavements have been constructed per room. The cost for one square meter of asphalt road, including preparation work, amounted to 470 mils; the cost of pavements is estimated at 400 mils. This results in an average of £P 1.516 per immigrant for internal roads and £P .768 for pavements.

There are wide variations in the outlays suggested for water supply and canalization facilities. It was decided that £P 3 per person for water supply is required for persons living in cities or towns (£P 2.445 per immigrant), and £P 3 per immigrant for drainage, canalization and sewerage. In agriculture it was assumed that water supply would cost £P 50 for each family of four, or £P 2.311 for each immigrant, only one-quarter of whom are expected by the Bizur study to go into agriculture.

On the whole, the contruction outlays suggested per immigrant for each type of service, although minimum, appear to be reasonable. The understatement in the case of education has already been pointed out. In the case of hospitals and nursing homes, the understatement will probably be magnified by the condition of the Jews entering the country. Considering the hardships which most of them have undergone, a larger proportion of them can be expected to require medical care than was taken account of in the estimates. The estimate of outlays required for factories and workshops are also very low. They amount to an allowance of about £P 30 per worker actually employed in manufactures, compared with £P 54 per worker allowed in our treatment of manufactures above.

Lastly, the estimates are on the low side since they omit activities which will become necessary under conditions of large-scale immigration such as arterial roads, railroad, ports, posts, telegraph and telephones. Adjustments for these items are made at a later point.

As compared with the summation of these estimates of £P 48.450 per person for Jewish immigrants, £P 20 appears to be a reasonable estimate for non-Jewish immigrants. These persons will probably tend to concentrate in the agricultural occupations. The breakdown by type of building for non-Jewish immigrants is suggested to be as follows:

	£P
TOTAL	20.000
Working places and business premises	8.000
Public buildings	7.000
Public works	5.000

Capital and Labor Requirements

Having estimated the amount of construction required to fill the backlog of non-residential private and public construction, and the amount of new construction required for each new immigrant, it is now possible to determine the total amount of capital and labor required for these purposes at different levels of immigration. These estimates are set forth in Table 32.

TABLE 32: ANNUAL REQUIREMENTS FOR NON-RESIDENTIAL PRIVATE AND PUBLIC CONSTRUCTION IN THE POSTWAR DECADE

(*In millions of prewar £P*)

	Assuming average net immigration per year for 10 years of			
	0	*68,400*	*95,600*	*125,000*
Capital required for—				
Elimination of backlog	£P .9	.9	.9	.9
Jewish	.3	.3	.3	.3
Non-Jewish	.6	.6	.6	.6
Natural growth	1.2	1.2	1.2	1.2
Jewish	.4	.4	.4	.4
Non-Jewish	.8	.8	.8	.8
Obsolescence	1.1	1.1	1.2	1.2
Jewish	.6	.6	.7	.7
Non-Jewish	.5	.5	.5	.5
Immigration		3.3	4.5	6.5
Jewish		3.1	4.3	6.1
Non-Jewish		.2	.2	.4
Total capital requirements	3.2	6.5	7.9	9.8
for Jewish construction	1.4	4.5	5.8	7.6
for non-Jewish construction	1.8	2.0	2.1	2.3
Total labor requirements	14,200	28,800	34,500	43,100
for Jewish construction	6,100	20,000	25,500	33,200
for non-Jewish construction	8,100	8,800	9,000	9,900

As shown in the table, the total amount of capital required to fill the needs of non-residential construction with no immigration will come to over £P 3 million per year, if the backlog is to be eliminated within ten years, and will require a labor force of over 14,000 persons. On the other hand, under the maximum immigration that we have projected, the capital requirements will amount to almost £P 10 million per year and a labor force of more than 43,000 persons will be required.

Under the maximum immigration assumption, it was necessary to make a special adjustment in the figures to allow for activities which will become necessary only under conditions of very large-scale immigration. As pointed out in Chapter 27, should the two cities of Tel Aviv and Haifa achieve a population of one-half a million each, it would be worth while to double-track the railroad line between them. This would entail an outlay, in prewar prices, of £P 1,500,000. Also, should the size of the population merit it, the port of Tel Aviv would be improved, costing £P 2 million in pre-war prices. The amount of £P 300,000 was added for the construction of two central fishing bases and £P 2 million for arterial roads, posts, telegraphs and telephones. In allocating these sums between the Jewish and Arab population, it was assumed that one-third of the benefit (and thus the cost) of the rail line and one-half of the outlays for roads, posts, telegraph and telephones would fall to non-Jews. The total amount added came to £P 5.8 million, £P 1.5 million of which was allocated to the non-Jews.

The labor force required for non-residential construction was determined very crudely by taking fifty percent of the capital costs (which go for wages and salaries in both on-site and off-site employment) and dividing them by the product of 455 mils per day (the average prewar wage) and 250 man-days per year. Thus under the assumption of no immigration, 50 percent of £P 3,221,200 is divided by £P 113.750 (455 mils x 250 days), giving a labor force figure of 14,159.

In the table below are summarized the total resources of capital and labor required to meet all types of demands for construction in Palestine in the postwar decade. For convenience these expenditures are again distributed evenly over the decade.

CAPITAL REQUIREMENTS FOR ALL CONSTRUCTION
(In millions of £P)

	Assuming immigration per year of			
	0	*68,400*	*95,600*	*125,000*
At prewar prices:				
Total	10.8	19.7	23.2	27.5
Housing	7.6	13.2	15.3	17.7
Non-residential	3.2	6.5	7.9	9.7
Jews	4.0	12.1	15.3	19.2
Housing	2.6	7.6	9.5	11.6
Non-residential	1.4	4.5	5.8	7.6
Non-Jews	6.8	7.6	7.9	8.3
Housing	5.0	5.6	5.8	6.1
Non-residential	1.8	2.0	2.1	2.2
At price index of 150:				
Total	16.2	29.6	34.8	41.2
Housing	11.4	19.8	23.0	26.5
Non-residential	4.8	9.8	11.8	14.7

In terms of prewar prices and under conditions of no immigration, almost £P 10.8 million per year for ten years, or a total of £P 108 million in all will be required. Under our lowest immigration assumption the total is raised to £P 197 million and under our highest to £P 275 million. (However, of these totals about £P 9,000,000 on our lowest assumption and about £P 19,000,000 on our highest are duplications of amounts stated in other chapters to be required for farms, factories and ports.)

Assuming no further immigration into the country, six-tenths of the construction required in the postwar period would be for non-Jews. Under the maximum immigration assumption, on the other hand, seven-tenths of the outlays would be for Jews.

If these total capital requirements are converted into postwar prices at an index of 150, they are increased to £P 162 million for the entire decade under the assumption of no immigration, £P 295 million under minimum immigration, and £P 412 million under the maximum immigration assumption.* This conversion does not affect the labor requirements estimates, since in these circumstances, labor costs would be proportionately higher.

It is worth while at this point to compare the summary figures on capital requirements for construction with estimates made by Dr. L. Gruenbaum in his *Outlines of a Development Plan for Jewish Palestine.* Using a somewhat similar method, Dr. Gruenbaum concluded that (at a price index of 150) £P 303.6 million would be needed for Jewish construction, £P 222 million of which is for housing and £P 81.6 million of which for non-residential construction. Dr. Gruenbaum's immigration assumption of one million Jewish immigrants spread over 12 years would be comparable to the midpoint between our immigration assumptions of 86,000 and 112,500 Jews per year. Averaged together, these figures give 99,250 per year, or 992,500 immigrants in ten years. The capital requirements for Jewish construction derived on the same basis come to £P 105,500 for housing and £P 66,500 for non-residential construction. Converting these figures to postwar prices at the index of 150, the comparison is as follows:

	Our estimate	*Gruenbaum*
	(Millions of £P)	
Housing	158.3	222.0
Other	99.8	81.6
TOTAL	258.1	303.6

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* Without duplication, the requirements for construction range from £P 282 million to £P 384 million, on the lower and higher immigration limits.

The essential difference between the two estimates lies in the fact that Dr. Gruenbaum assumed £P 200 per room for housing, while we have used £P 150. Our figures for Jewish requirements are probably minimum in all respects.

TABLE 33: LABOR REQUIRED ANNUALLY FOR ALL CONSTRUCTION IN THE POSTWAR DECADE

	Assuming average net immigration per year for 10 years of			
	0	*68,400*	*95,600*	*125,000*
Total labor force required for all construction including both "on" and "off-site" work:				
Using method "a" for housing *	52,000	94,600	111,200	131,500
Housing	37,800	65,800	76,700	88,400
Non-residential	14,200	28,800	34,500	43,100
Using method "b" for housing *	47,500	86,700	101,900	120,800
Housing	33,300	57,900	67,400	77,700
Non-residential	14,200	28,800	34,500	43,100
Averages:				
Total	50,000	91,000	107,000	126,000
Housing	36,000	62,000	72,000	83,000
Non-residential	14,000	29,000	35,000	43,000
Jewish	18,000	56,000	70,000	88,000
Housing	12,000	36,000	45,000	55,000
Non-residential	6,000	20,000	25,000	33,000
Non-Jewish	32,000	35,000	37,000	38,000
Housing	24,000	26,000	28,000	28,000
Non-residential	8,000	9,000	9,000	10,000
For "on-site" work only (82 percent of the total):				
Total	41,000	74,620	87,740	103,320
Housing	29,520	50,840	59,040	68,060
Non-residential	11,480	23,780	28,700	35,260
Jewish	14,760	45,920	57,400	72,160
Housing	9,840	29,520	36,900	45,100
Non-residential	4,920	16,400	20,500	27,060
Non-Jewish	26,240	28,700	30,340	31,160
Housing	19,680	21,320	22,960	22,960
Non-residential	6,560	7,380	7,380	8,200

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* Under method "a" the manpower requirements for housing are determined by multiplying each room required by ¾ of a man-year per room. Under method "b" the housing labor requirements were determined the same way as for non-residential construction, i. e., 50 percent of the capital cost is assumed to go for wages and salaries on and off-site; the wage level is assumed to be 455 mils per day (the average prewar wage); and 250 work days are assumed per year.

The labor force necessary to carry out the construction programs under the varying levels of immigration is set forth in Table 33. Under the assumption of no immigration, the labor force required may be estimated very roughly at 50,000; it would amount to 7.7 percent of the total labor force in 1946, and 6.4 percent in

1954. If the estimates are restricted to on-site employment alone, the labor force would be 41,000 and would amount to 6.3 percent of the total labor force in 1946 and 5.2 percent in 1954. This compares with an employment figure of 63,000 in 1942 at the height of the war construction boom, when construction constituted 10.6 percent of the total labor force. Thus it becomes clear that labor would not be a limiting factor if, with no further immigration, the present needs for construction in Palestine were evenly distributed over the next decade.

Under conditions of maximum immigration, however (and the total amount of construction being evenly distributed over the decade), it is another story. In this case a labor force of about 126,000 workers would be required each year; construction would account for 17.4 percent of the total labor force in 1946 and 9.6 percent in 1954. On-site employment alone would be 14.2 percent and 7.9 percent.

If it is assumed that only Jewish labor is hired to fill the needs for Jewish construction and only non-Jews for non-Jewish construction, the resulting proportions would look like this:

PERCENTAGE OF RESPECTIVE LABOR FORCES WHICH WOULD BE EMPLOYED IN JEWISH AND NON-JEWISH CONSTRUCTION *

		Assuming no immigration		*Assuming maximum immigration*	
		On- and off-site	*On-site only*	*On- and off-site*	*On-site only*
Total	1946	7.7	6.3	17.4	14.2
	1954	6.4	5.2	9.6	7.9
Jewish	1946	7.5	6.2	28.5	23.4
	1954	6.7	5.5	11.8	9.6
Non-Jewish	1946	7.8	6.4	9.1	7.5
	1954	6.2	5.1	6.8	5.6

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* For Jews the labor force is estimated at the rate of 41 percent of the total population and for non-Jews at the rate of 32 percent.

Under conditions of no immigration, there would be little pressure in construction from the continued segregation of the two labor forces. But should there be a large-scale Jewish immigration and should the total construction activity be evenly distributed over the decade, 28.5 percent of the Jewish labor force would be working in both on- and off-site construction in 1946. On-site construction alone would require 23.4 percent of the Jewish labor force, as compared with 11.2 percent in the peak employment year of 1942. In 1954, on the other hand, on- and off-site construction would account for only 11.8 percent of the Jewish labor force.

CONSTRUCTION PROBLEMS

Building Materials

In the prewar years, imported materials for construction purposes accounted for approximately one-fourth of the value of construction. This major reliance on imports was accounted for by the lack of forests and of heavy industries in Palestine. Though most of the structures in Palestine are built primarily of stone and cement, lumber is needed during construction and for doors and frames and other parts of the buildings. During the years immediately preceding the war, manufacturing plants were engaged in producing materials in increasing quantities and varieties, but foreign sources continued to provide a large share of the total needs.

After the war, Palestine is almost certain to depend less and less upon imported materials for construction purposes. This reduced dependence on imports will be possible as a result of three factors. First, there has already been and will continue to be a growing tendency for domestic manufacturers to produce the supplies and parts and materials essential for construction. Second, in view of world shortages, there is likely to be increased substitution of readily available domestic products for those which cannot be produced at home; one of the largest imports is lumber, and considerable experimentation is taking place which will diminish the lumber requirements in building. Third, the drive to achieve quantity output will result in simplicity and standardization, the elimination of frills and non-essentials, bringing a decline in the dependence of the Palestine building industry upon materials needed from abroad.

During the war, when the import of building materials was severely restricted because of shipping limitations, a number of industries sprang up or expanded greatly in the field of building materials. Their costs have been extremely high, but because of the large demands for materials needed particularly by the British Armed Forces and the Palestine Government, the plants operated profitably. These industries will continue to be sheltered for some time because the world-wide demand for building materials is likely to be very high as the result of war destruction and the backlog of needs for building. Of course, many of the products for construction purposes which are being or may be produced in the country will depend upon raw materials from abroad. Some of these materials, as well as fabricated articles, may be scarce and high-priced in the international market for some years.

Nevertheless many building products will have to be imported entirely. These products include galvanized iron sheets, lead and iron pipes, timber, brass sheets, and similar products. Building materials and products manufactured locally from imported materials will include nails, binding wire, steel window frames, wooden doors, screens, locks, hinges, pipes, water closets, sinks, electrical products, paint, and other similar products. Building materials produced locally from local materials include cement, tiles, bricks, lime, gypsum, insulation material, turpentine, glass, and many other products.

The Manufacturers Association has surveyed the prospects for expansion in building materials production in Palestine. Experts in the Association believe that the existing capacity for cement production is adequate, although other analysts anticipate that some new facilities will be necessary. The Nesher Cement Company is the sole producer in the country with an annual capacity of 240,000 tons. Should an all-out construction program take place, it is likely that some expansion will occur. There has been talk of the Histadruth entering this field. There is no doubt concerning the rapidly expansible capacity for tiles, bricks, earthenware, and electric cables and fittings to meet all needs. There are optimistic expectations with respect to plastics, although the basic materials will have to be imported. The price of glass is now fantastically high, and a very sharp increase in efficiency and declining costs will be necessary to compete with imports. There is no rolling mill for steel in Palestine and not much likelihood of its development. Timber will continue to be a costly and an essential import although aluminum or steel frames may be substituted. The report of the Palestine Reconstruction Commissioner states that experiments are being made in using different forms of concrete roofing with prestressed steel, requiring only one-sixth of the usual reinforcement. Favorable results have been obtained.

The Research Committee for Economy in Building of the Association of Engineers and Architects in Palestine prepared an analysis of the capacity in Palestine to produce construction materials. These capacities were compared with quantities required for one and one-half million square meters of floor area per year, which would represent the equivalent of perhaps 60,000 rooms. This report suggested that adequate capacity is available for cement, glass, tar paper, nails, waterproofing materials, and a considerable number of other items. On the other hand, some expansion would be needed for producing tiles, concrete blocks, burnt clay bricks, plywood, and electric wire. The list of products which could be supplied by home production was quite impressive.

In general, it appears that the ratio of imported materials to the total value of construction might in the future decline to about one-fifth. This development will be based largely on final processing in Palestine of imported basic materials. This shift will result in increased employment in manufacturing industries, less reliance upon the uncertainties of shipping and outside sources, and possibly in lower costs for many products. The matter of costs will depend upon the tariff policy on both raw materials and fabricated goods. A sizable and widespread tariff protection on manufactured items would increase the proportion of fabricated materials derived from domestic sources but would no doubt bring about a rise in costs. Without protection, local products will increase in importance and probably contribute some reduction in total cost of construction.

Costs, Financing, and Rents

The Palestine cost-of-building index at the beginning of 1945 was 380, on a prewar base of 100. In England the building price index increased to approximately 200. In the United States, the rise has been to less than 150. The increase in prices in Palestine occurred because of increased costs of practically all factors of production. Despite lower interest rates, the total interest burden on the finished building, in view of the higher initial outlays, is considerably higher than before the war.

It is generally recognized that high costs will be a retarding element in any postwar building program. Some reduction in prices is inevitable, as restrictions on imports are lifted and shipping becomes available. Wages will fall as wartime demands are reduced, domestic supplies of consumers goods rise, and increased imports of consumers' goods combine to bring about a decline in the cost-of-living index.

A gradually declining price index, however, will not be conducive to capital expenditures. Investors will tend to delay their outlays in anticipation of lower costs in the immediate future. Under such conditions, the supply of building funds from private sources will not respond to the great demands for buildings. A sharp and drastic price readjustment would be more conducive to building activity since the prospect of further and continued price declines would be greatly reduced.

It may be observed that some building will occur under any price situation because many individuals will want homes for their own purposes and can afford the risk of falling prices. Their willingness to risk some deflation in the value of their new buildings is explained in part by their large wartime earnings and in part by their desperate need for shelter. However, the volume of such construction will be limited and will not fill the needs of those whose requirements are greatest.

Some projections have been made with respect to prices. It is hoped by some officials of the Jewish Agency that the index of cost-of-building may be reduced to 200 within a year or so. There is some thought that the index might even ultimately fall below 150. It is likely that once the index drops to 200, there will be a substantial rise in construction, especially if more lenient financing arrangements can be developed. Lower interest rates and longer-term amortization will certainly stimulate building even with the index as high as 200.

One very important element in the maintenance of high costs of building in Palestine is the level of wages. There is a tendency among many leaders in Palestine to underestimate the significance of wage rates in total costs and to give almost exclusive attention to import prices. It is true that materials prices have risen more than wages. The index of the cost of labor in construction at the beginning of 1945 was 250 on a prewar base, as compared with an index of 450 for materials. Obviously any tendency to return to prewar relationships will necessitate a sharper decline in the price of materials than in wage rates. Further, if a substantial increase in the productivity of labor can be achieved, it may be possible to pay relatively higher wage rates than prewar and still materially reduce total costs. But even so the wage rates must be reduced substantially.

The wage problem in the field of construction will be a particularly complex one. If there is any single field of activity in Palestine in which the supply of skilled workers will be inadequate relative to the demand for such labor, it will be in the field of construction. The construction workers are highly organized and they may take advantage of the scarcity of skilled labor. It would be unfortunate if wage rates in construction could not be lowered, since high costs which discourage building will in turn seriously limit immigration. New housing is and will continue to be one of the prime requisites to immigration. It will be of crucial significance for the economic development of the next decade whether the Histadruth can control the wage policy of construction workers so as to give the maximum impetus to the flow of funds into this field.

Another very important element in the cost of construction is the price of land. Without some Government contribution to the solution of this problem, essential building activity will inevitably be deterred. The control should include fixing land prices, expropriation, and heavy taxes on capital gains derived from land. As the population grows, higher and higher land prices can become an increasingly critical obstacle to healthy development. The device followed so extensively in agricultural land, namely the purchase of land by the Jewish National Fund and its long-term lease to settlers, may of necessity have to be extended to urban development.

Even assuming that those who are now in Palestine can somehow finance their own building needs, it is obvious that construction for meeting the requirements of new immigrants must be financed largely from outside sources through public or quasi-public institutions. A large portion of the new immigrants will be without the bare means of livelihood, let alone funds to provide for their needs for housing and other construction. The homeless Jews of Europe and most of those who may come to Palestine from North Africa or Middle Eastern countries will not have funds to pay fancy prices for housing. The period of orientation of these immigrants is likely to yield them low or moderate incomes and they will not be in a position to pay high rentals or make large down payments.

Interest rates on mass housing must be low, and provision must be made for longer term amortization of loans than has been characteristic of financing in Palestine to date. Most loans have extended for periods of 5 years up to 20 years, with resulting heavy amortization charges upon home owners as well as tenants. Considerable improvement over prewar provisions for financing would appear to be absolutely prerequisite to a reasonably satisfactory rental-income relationship for tenants. In view of the relatively moderate use of lumber and the widespread use of stone, the durability of residential structures would appear to justify a much longer period of amortization than is now common. If the Government will participate in financing and if the political stability of the country can be better established, much longer term amortization should not be too difficult to achieve. Interest rates can also be brought down to a more reasonable level through Government participation.

It may be possible to finance part of the cost of construction through relatively low interest rate mortgages granted by private sources for reasonably safe percentages of the total value of constuction. Thus, if some governmental provision is made for financing up to, let us say, one-third to one-half of the value of the land and buildings, it might be possible to obtain substantial funds from private banks and insurance companies in England and the United States for 50 percent of the investment, with prior liens, on a purely commercial basis. The proportion of funds so derived and the rate of interest will depend in large measure upon present and potential costs of construction, immigration policy, economic outlook for the country, government fiscal policy, and alternative investment opportunities for the capital of England, America and other capital export countries.

Certainly some positive program either of subsidies or direct Government loans or Government guarantee of loans will be essential in the financing of postwar construction in a rapidly expanding Palestine. There is already some recognition of this problem, as evidenced by the creation of a number of construction organizations, financed in whole or in part by such institutions as the Jewish Agency and the Histadruth. Local governments in Tel Aviv, Haifa, and other municipalities are cognizant of the need for public housing programs and have made representations for assistance to the Palestine Government. Many officials of the Government have also recognized this situation and, while concrete plans are lacking, there is an increased awareness of the positive role which government must play in expanding housing facilities within the country. The fullest possible utilization of private funds should be envisaged, but there must be recognition of the absolute need for governmental assistance in such a program as will be needed for a rapidly expanding population.

It is difficult to appraise the probable level of rents during the postwar period, or the relation of rents to investment in housing, and to the ability of tenants to pay. As has been indicated, the ratio of rent to income among the lower wage groups was high prior to the war. During the war, the situation would probably have become intolerable had it not been for rent control. Net rentals, namely the income of the landlord after meeting all expenses incidental to the ownership activity, provided a reasonable return on investment before the war. As a result of rent control on the one hand and rising costs and higher values on the other, the ratio of net rents to the market price of buildings fell sharply during the war.

Rents will be determined not only by the cost of construction but also by the cost of financing. Lower interest rates and longer term amortization can bring rentals and ownership costs down to prewar levels even though initial construction costs remain greatly above their prewar level. This is the sphere in which Government initiative can make its decisive contribution. For a reduction in building costs, we must look to a reduction in wage rates and greater efficiency in building methods.

Postwar Plans

The Government estimate of the housing backlog at the end of 1944 set the figure at close to 140,000 rooms required in order to bring the density of housing down to two persons per room.

The Government set up a program for the immediate construction of 27,000 rooms, half and half for Jews and non-Jews, to bring the average density down to three persons per room. An emergency demand was made upon the Middle East Supply Center for materials to carry out this program. It was hoped that the materials would be available from America. Construction would be left to private enterprise. In June 1944, the project had hardly been started. No comprehensive Government construction program had been developed in Palestine by March 1945. Although the Committee on Welfare and Development (1940) recommended several public works schemes, nothing has as yet come of its proposals.

Some of the municipalities of Palestine, having taken cognizance of the building situation and the severe need for residential construction, have been engaged in developing plans for the postwar period. The Reconstruction Commission of the Government of Palestine has been helping several communities prepare programs for future housing activities. There have been no commitments as yet by the Government with respect to such projects. In fact, the Reconstruction Commissioner indicated in his interim report that the responsiblity for housing is regarded by Government as primarily that of private organizations, municipalities, and the Jewish Agency. The report states specifically that it is the responsibility of the Jewish Agency to make housing provision for new settlers. The Government is leaving to municipalities and to private enterprise the construction of workmen's houses. The report adds that Government's responsibility, a comparatively light though important one, is to give facilities for loans for which municipalities will pay interest and amortization, and, where possible, to provide state domain land on lease or gift for the sites of workers' houses.

Considerable plans with respect to municipal housing have been made by the Municipality of Haifa, which regards municipal housing as an absolute necessity. It has already expressed the desire for a £P 500,000 loan for the construction of 1,200 rooms for both Jews and Arabs. Government land is being sought for part of these homes. It is proposed that the funds be provided on long-term amortization and at low interest rates; that the apartments be built at a cost of £P 400 per room and houses at £P 300 per room, or moderately less than wartime prices; and that the rentals be £P 2.25 per room for apartments and £P 1.75 per room for houses. These rooms will be made available to immigrants and to lower income workers.

The Council of Tel Aviv plans to build 2,500 houses of two rooms each. The cost figures which are involved in this construction program appear to be far below what can be expected in reality.

It is proposed that these 2,500 houses of two rooms each be built, under mass production and standardized techniques, at £P 300 per house. The cost at the beginning of 1945 for similar structures would be over £P 700 each. The Council has recommended a rental of £P 1.5 per month for a two-room house, with amortization covering forty years. This figure also appears to be far too low if the program is to be self-liquidating. An additional outlay of £P 335,000 was proposed for the acquisition of land and for related construction.

The Municipality of Jerusalem has no specific plans for housing construction. The Reconstruction Commissioner expressed the belief that no municipal or Government housing schemes are essential in Jerusalem and that private builders will construct adequately once materials are available. He also stated that in Jaffa, Nablus and most other communities, private enterprise can handle the task. It is stated that few Arab places will need municipal assistance. These judgments reflect not the adequacy of housing in Jerusalem and in strictly Arab communities—which contain some of the worst housing in the country—but the restricted conception of Government responsibility prevalent today in the Government of Palestine.

Many quasi-public construction organizations, most of which are supported financially by the Jewish Agency and Histadruth, have made plans for both private and cooperative housing activities. Similarly, private companies are planning considerable activity. These plans are based upon current and prospective conditions, disregarding new immigrants. Obviously, therefore, additional plans must be made for any large-scale immigration. If responsibility is to be placed exclusively on the Jewish Agency for the housing of immigrants, as is suggested by the Reconstruction Commissioner, Government must place all of its financial resources at the disposal of the Jewish Agency. Government participation is essential to an adequate construction program.

Construction and Economic Stability

In view of the tremendous requirements of labor and capital involved in construction for immigration of the magnitude that we have projected, important policy questions are raised as to the share of the national resources that it is wise to devote to construction. In what measure is it safe to distort the whole structure of an economy by such a construction boom? On the basis of the requirements that we have outlined, the share of total resources devoted to construction will be far out of line with the share utilized in the past in Palestine or any other country. How many investment errors must result from such a boom! How great a dislocation there will be of the long-term structure of employment! The dislocation will be particularly great if there is continued adherence to the pattern of two labor forces, Arab and Jewish. Decided economic advantages to both communities could be derived from the employment of Arab labor, side by side with Jewish, on Jewish construction. However, as the tables given earlier in this chapter indicate, even this merger of labor forces will not suffice to eliminate the danger of an unhealthy construction boom and a disastrous aftermath.

There appear to be three alternative policies which might be followed. First, current consumer needs might be denied in order to divert resources from other purposes to construction activity; this policy would require heavy taxation, import controls, and rationing. Second, the construction program might be so scheduled as to limit the total volume of building activity to a given proportion of the national production and thereby postpone some building as long as possible; this policy would require a tight system of construction licensing. Third, a plan might be worked out whereby a disproportionate allocation of resources to construction might be allowed temporarily, with careful attention to the repercussions of such a policy on other economic activities; this third variant is merely a more elastic version of the second, and it too would require licensing of all building.

It would be most unfortunate to permit the diversion of manpower and materials from manufacturing to construction to such a degree as seriously to retard the industrial development of the country. The long-run economic potentialities of Palestine depend especially upon its industrialization. In the immediate postwar years, world markets should be favorable; it is during this period that Palestine must engage vigorously in expanding its present manufacturing activities and undertaking production in new fields. Unless such a policy is pursued immediately, Palestine will have lost the opportunity to capture available markets and to secure a foothold not only in the Middle East but elsewhere for its products.

On the basis of short-term demands for resources, there is no doubt that the construction needs will appear to be greater and more pressing than will manufacturing activity. Therefore, if only short-term considerations are permitted to determine the allocation of resources, manufacturing will surely suffer. Construction will be able to bid higher. Low costs will be essential for manufactured products if international competition is to be met; if wage rates are unduly high because of the competition from building activity, the development of international markets for manufactured products will be seriously impeded.

A construction boom would have a similar unfortunate effect on the expansion of modernized, market-oriented agriculture. Palestinian agriculture cannot pay building workers' wages. Yet why should immigrant labor undergo the difficult training necessary to make a living in farming if better wages can be earned in building? The same pressures from building will inhibit the expansion of basic services in education and health, which deserve highest priority from the point of view of Palestine's long-term progress.

If an undue segment of the Palestinian economy is devoted to building activity in the next few years, at a rate which cannot possibly be maintained over the longer run, a serious readjustment will be required at the time when building activity declines. This readjustment may be especially acute and hazardous to the entire economy if world markets are not favorable at that time. The decline in building activity would have a damaging effect upon total income and the total level of consumption of the country and would thereby make export markets most important as a source of income and employment. But the adjustment of industrial and agricultural production to meet world competition cannot be accomplished suddenly by enterprises long starved in favor of construction.

In addition to consideration of manpower and materials, attention should be directed also toward the question of investment and capital funds. If construction activity is permitted to proceed without any limitations, it may divert needed investment from more important areas to building purposes. If the political situation is favorable, the security of investment in construction will be good, and investors may be more inclined to direct their capital into building activity than into the more hazardous areas of manufacturing. Venture capital will be very necessary in manufacturing if substantial industrialization of the country is to be achieved.

These considerations point to the great importance of intelligently planning a well-integrated and carefully-timed program for the construction industry.

CHAPTER 27

COMMERCIAL POLICY, SERVICES AND TRADE IN THE NEXT DECADE

COMMERCIAL POLICY

Repeated emphasis has been given to the point that Palestine's development in the postwar decade is dependent upon its ability to replace many items formerly imported and to extend its export markets. Increased agricultural exports must be sold in Europe and a wide range of diversified manufactures principally in the Middle East. The attainment of these objectives will be seriously jeopardized if the prewar commercial policy should be continued.

The major source of danger in the prewar policy lay in the Mandatory's interpretation of Article 18 of the Mandate. By virtue of this Article, Palestine was obliged to maintain a nondiscriminatory tariff on the goods of all members of the League of Nations except former members of the Turkish Asiatic Empire (to which she was permitted to grant special favors). Although this provision was designed to prevent the Mandatory power from exploiting the Mandate, its interpretation by the British in the case of Palestine has prohibited anti-dumping measures and the negotiation of reciprocal trade treaties. Not only was Palestine prevented from discriminating against any *individual* nation; she was also prevented from taking counter-measures against any *class* of discriminations.

At the moment, the possibility of freeing world trade from its prewar shackles remains a hope. To the extent that the hope remains unfulfilled, Palestine should be permitted to develop and use techniques of economic defense. One such technique for safeguarding the domestic market against unfair trade practices from abroad is to impose a discriminatory tariff on dumped articles. The continuance of the possibility of dumping is not precluded despite the fact that the worst offenders in this widespread practice, Germany and Japan, probably will be prohibited from pursuing such a policy, at least in the first postwar decade.

A technique for promoting exports when trade channels remain restricted is the conclusion of reciprocal trade treaties. With mass immigration. Palestine will be a relatively large importer of foodstuffs and building materials. Palestine should be empowered to use this bargaining power to gain markets for its own exports if these exports have failed to obtain markets because of preferential treatment accorded to other exporting countries.

With respect to general tariff matters, the Palestinian Government already possesses sufficient authority for the development of a rational policy directed toward the removal of burdens on exports and the provision of educational tariffs, or subsidies, for "infant" industries. In the past the very conception of the role of tariffs has been inimical to such a rational policy; the tariff has been conceived primarily as a fiscal measure rather than as an instrument of economic development. From 1923 to 1940 the general tariff rate was fixed at 12 percent ad valorem. The schedule consists, fundamentally, of an enumeration of the exceptions to the general rate. In response to interested parties, exemptions of certain raw materials and capital equipment from all duties were obtained, and certain processed goods such as textile products were accorded moderate protection. These amendments remained piecemeal efforts only, and the tariff at the outbreak of war was essentially a very regressive form of taxation. During the war it became still more regressive because the general rate was raised in two stages to 20 percent.

In the prewar years, despite numerous amendments, the tariff impeded economic development by adding to the costs of production. As a fiscal measure (with the exception of protective duties on wheat) improved foodstuffs were taxed. The tax was reflected in prices and the workers' cost of living, which in turn affected wage rates. And the level of wage rates is an important determinant in industry's competitive position both in local and export markets.

The anomalies of the tariff schedule have also had a retarding effect. Thus, while most imported raw materials have been exempt from duty, numerous semi-processed materials, which are further processed by Palestinian industry and thereby constitute its primary materials, have remained subject to duty. This practice has persisted particularly in the metal products. Thus, iron bars, rods and angles, iron black sheets and plates, iron galvanized sheets and plates, sheets and bars of brass and copper, lead sheets, tin bars and ingots and zinc sheets all have been dutiable.

The same inconsistency, but to a lesser extent, is found among investment goods. While machinery of all kinds and component parts are admitted free of duty, tractors, tools and implements other than agricultural, scientific instruments and appliances and most items of office equipment have been taxed.

Lack of adequate articulation in the schedule has also been a source of difficulties. There are cases where the raw materials and the derived finished product are included in the same category and taxed alike. Drugs, raw and prepared, for example, constitute a single classification. There are other instances where the raw material bears a duty but the finished product is duty-free. Cotton and wool waste and cotton and wool yarns are cases in point. Other broad categories perhaps once were adapted to Palestine's economic development but now are ill suited in view of the increased specialization of Palestine's industry.

If there had been an effective system of drawbacks, the imposition of tariffs on semi-processed materials destined for re-export in finished form would not have been a serious burden. Since 1935 there has been a remission of all duty, less 10 percent, on any imported material used in the production of goods exported from Palestine, provided the Standing Committee for Commerce and Industry (an advisory body with representation from Government and various branches of the economy) agrees that the drawback does not work to the disadvantage of producers of similar commodities and that it is to the interest of Palestine that it should be allowed. This system in practice has been characterized, and not unreasonably, by the Department of Trade and Industry of the Jewish Agency as "ponderous, complicated and expensive, and its application permissible only subject to such precautionary devices that in practice very little use indeed can be made of it." The same memorandum concludes that "a far-reaching amelioration of the drawback is an absolute necessity for any healthy export policy as long as raw and auxiliary materials subject to duty have to be imported from abroad."

The most effective solution, of course, is the one previously suggested: the elimination of the import duty on such articles. If, however, in a transitional period some such duties must be retained for fiscal reasons, a workable system of drawbacks should be instituted. Another possibility, though of lesser utility, is the creation of free port zones, one in Haifa and one in the Jaffa-Tel Aviv area. Such an arrangement is in effect a system of drawbacks to those who can afford to establish a factory in the free zone. Thus it favors those who have not yet begun operations or those who have ready access to the capital market and therefore can obtain funds for a second plant. Under a system of drawbacks, on the other hand, the entire country constitutes a free-port area; the drawback procedure entails only the negligible charge of financing the tariff duty during the period of production.

Aside from high tariffs directed at a specific country as a defense against dumping, there is only one type of high tariff that can be reconciled with the long-term interest of the country, and that is an "educational" tariff for a new industry. Where careful examination indicates that an industry recently or about to be established could produce competitively after the necessary skills have been developed, other production problems solved and a market secured, such an industry should be granted temporary protection from competition by long-established producers. Such grants of temporary protection, however, should be subject to automatic review every few years to determine whether the infant industry has come of age or should die aborning.

An alternative procedure for protecting infant industries is the granting of direct subsidies, a procedure having certain advantages over tariffs. In the first place it is clear that action is being taken and how much it costs, while tariffs obscure the existence as well as the amount of subsidy to domestic producers. Because the burden on the taxpayer is so clear and the payment being made so obvious, it is easier to remove subsidies when the need for them no longer exists than it is to remove tariff protection. In the second place, whereas a tariff constitutes a regressive tax, one which bears heaviest on the lower-income groups, subsidies can be paid by taxes levied according to the principle of ability to pay. The more goods it is necessary to protect, the more significant does this factor become.

Direct subsidies, however, would probably present far more administrative difficulties than tariffs because no Government would be content to administer a direct subsidy in the crude way accepted without challenge when subsidies are granted indirectly through tariffs. If a subsidy is granted as a flat payment per unit of output, it need not be difficult to administer. The obligation to furnish reliable evidence of the magnitude of output could be imposed on the producer. Only if subsidies attempt to differentiate in a comprehensive way among firms with varying cost structures need the personnel required to administer them be much greater than the number needed for the administration of tariffs.

If world trade channels once more become free, tariffs are justified only as an anti-dumping measure or to protect infant industries. If, however, trade channels remain blocked by tariff barriers that can be lowered only by reciprocal trade treaties, it then would be necessary for Palestine to have a high general tariff from which concessions would be granted in negotiating reciprocal trade agreements. Otherwise Palestine would have no favors to grant unless it was willing to resort to the combersome system of quotas.

The same consideration applies to inclusion in the system of Imperial Preference, which is a special form of reciprocal trade treaty. As long as Palestine is utilized by Great Britain as an important communications link in imperial defense, its demand for inclusion might well be honored. On the export side, it would immediately affect chiefly Palestine's export of oranges, which would then have a tariff advantage in the British market over exports from Spain and the United States. On the import side, British textiles and metal products, in the early years, might seriously impair the development of these industries in Palestine unless the tariffs erected for bargaining purposes were sufficiently high.

Commercial policy must be conceived as embracing more than tariff matters. Governments traditionally implement private efforts in international trade by the collection and publication of commercial intelligence. The Palestinian Government has completely neglected this type of promotional effort, and by default this work for the Jewish community has devolved upon the Foreign Trade Institute, organized by the Jewish Agency and the manufacturers. Although the Institute's efforts have been creditable, they have of necessity been circumscribed. The function can be performed most effectively only by an organization that commands the prestige and resources of a governmental agency. A development-minded government would give a high priority to this activity.

Government cooperation with industry is also a prerequisite for the maintenance of quality standards of export merchandise. In defects of quality and failure to adhere to standards, the sins of the few are visited upon the many; this fact makes regulation of quality and standards imperative. The entire effort, moreover, is handicapped by the popular association of "Levantine" with inferior quality and sharp dealing.

In this field, too, the Foreign Trade Institute has made some modest beginnings and progress commensurate with the effort expended. Progress is attested by the fact that customers have placed "repeat" orders. In 1944, for example, the Institute completed 4,208 orders on behalf of 412 manufacturers and 554 buyers. That is, on the average, each buyer placed 7.6 orders and each manufacturer filled 10.2 orders. The Institute's efforts, however, are inadequate even for the Jewish community, and any such program should apply also to the Arab community. This is a proper sphere for self-regulation under Government supervision.

SERVICES AND TRADE

In the Jewish community for the year 1943 about one-third of the gainfully occupied persons were engaged in transportation, personal, professional, and business services (other than finance) and in trade. In the total Palestinian economy, the share employed in these activities in 1942 was approximately one-fifth. The postwar possibilities in such important branches of economic activity obviously must be canvassed.

At best, the prediction of the probable course of events in the near future is inherently difficult. The difficulty is considerably accentuated when there are no systematic data describing the present. And this is the situation that prevails with respect to the structure and magnitude of operations in the services and trade, most particularly internal trade. Nonetheless, it seems worthwhile to advance some general considerations, the effect of which can be expressed in terms of "more or less."

It is necessary to bear in mind several of our basic assumptions. We have assumed that there will be a mass immigration of Jews into Palestine within the decade. This immigration will tend to create boom conditions. The percent of the labor force engaged in the services and trade will therefore approach the wartime proportion rather than the higher prewar percentage. In the prewar years there was considerable concealed unemployment and underutilized capacity, especially in trade and transportation, which was substantially reduced under conditions of full employment. Accordingly, our point of departure will be the percent employed in the war years, and our inquiry will seek to establish the probable percent of the labor force that will be engaged in these occupations and industries in 1954.

We have also assumed that the per capita real income of the Jewish population will approximate the prewar level. Expansion in these fields would not be brought about by the expenditure of additional income received by each person—the more "normal" basis for an expansion of the tertiary occupations according to Colin Clark—but primarily by the presence of many more individuals. This is subject, however, to several qualifications. Palestinian residents who have formerly purchased services abroad may henceforth transfer these purchases to Palestine. Or foreigners may purchase Palestinian services which previously they had not purchased. (The development of the tourist trade would be a case in point.) Another possibility consistent with our assumption is the expansion of intermediate or business services out of all proportion to the growth of population or labor force. It is the implications of these assumptions that must be traced.

Railroads

In the matter of inland transportation, there is no reason to believe that there will be any substantial changes in the existing pattern. The carrying of passengers and general goods will remain the province of road transport. The bulk freight of low value destined for or originating in neighboring coastal cities will probably be moved by coastwise schooners. There will remain for the railroads then the hauling of bulk freight to and from the Haifa port in addition to handling a limited list of commodities locally produced and consumed, such as oil refinery products and cement.

The volume of bulk traffic clearing through the Haifa port, particularly imports, will increase at a greater rate than, say, population if our analyses of development of manufactures and construction are correct. Although it is envisaged that in manufactures Palestine will become more self-sufficient in terms of finished goods, this will be achieved only by importing raw materials and semi-processed commodities. These lend themselves to bulk shipment much more than do the finished articles. That is, proportionately there will be more imports of ingots and sheet metal than of hardware; or more of raw cotton than of piece goods. This shift in the composition of imports will favor the increased use of the railroads.

It is all the more significant therefore that the Palestine Railways system proposes to have the railway act as an extension for sea transport by conveying traffic in bond by rail to and from Haifa and the inland towns where Customs Houses could be set up for the clearance of traffic. This extension of "in bond" service would save merchants much trouble and expense by eliminating the necessity of clearing their goods at a port. For this purpose plans have been drawn for the erection of a large block of warehouses along with a new station in Tel Aviv. It is also proposed to increase efficiency through improvements in roadbed, rolling stock, rail access to Jaffa and Tel Aviv ports, simplification of rate schedule, financial accounts separate from the Government budget, etc., none of which calls for extensive capital expenditures. Improvements costing several millions of pounds Palestinian, such as the laying of a double track between Haifa and Tel Aviv and a direct entrance into Tel Aviv, have no economic justification in the opinion of the Director of Railways, unless Jaffa-Tel Aviv and Haifa each have a population of a half million. This seems reasonable. However, if our assumption of mass immigration is fulfilled, it is barely possible that these cities may achieve the requisite size.

The proposed changes will enable the railway to carry out its economic function efficiently. Certainly the country's development program will not be retarded by the railway system. The railways will remain primarily a field of Arab employment. In 1939 only about 350 workers out of a total staff of 4,200 were Jewish. The unusually low wages of the industry and difficulties of arranging for observance of Saturday Sabbath failed to attract any larger number. With the continuance and extension of the wartime improvements in the railway wage scale into the postwar period of deflated wages, the industry may become more attractive to the Jewish worker. The Director has urged a greater participation by Jews as a means of enhancing the operating efficiency. By 1954 the railway industry may employ 600 to 750 Jews. It should continue to be at least as important in total Arab employment as it is at the present time.

Motor Transport

By implication, virtually all passengers except those traveling to cities in neighboring countries as well as the general goods traffic will be carried by road transport. What are some of the factors that might cause some modification of the wartime experience of the relative numbers of the total labor force employed in this industry?

Intraurban passenger traffic will be appreciably expanded out of all proportion to the gain in the labor force if the mass immigration should cause any substantial extension of the present major cities. A partial offset to the latter is the very strong possibility that private automobiles will be more widely owned than either during or prior to the war. Once imports of automobiles are resumed, this increase in private automobile ownership is virtually assured by the individual capital accumulation from wartime profits and by the wartime improvement in the road network. However, this in turn would cause a corresponding increase in the number employed in filling stations and in repair garages.

Wider use of privately owned automobiles would also affect interurban bus traffic. An expansionist offset would be the possibility of new settlements and towns being established in areas formerly without Jewish colonization. The development of the Negeb would be a case in point.

At least one other general factor affecting both intra- and interurban traffic must be taken into account. The number employed by the road transport companies during wartime was inflated by the highly excessive maintenance and repair work necessitated by the embargo on importation of new cars and spare parts. If imports had remained normal, the same volume of traffic could have been handled by fewer employees.

In the case of goods transport there is another consideration. In the event of mass immigration Haifa port, even after possible extensions have been made, could not economically accommodate Palestine's shipping needs. A deep-sea harbor at Tel Aviv would then be a necessity and presumably would be constructed. This would eliminate much of the hauling of goods to and from the Haifa port and the southern district. The length of the average haul would be appreciably reduced, which means that given equipment and personnel could handle a larger volume of traffic.

Continued consolidation of operating companies both in passenger and goods transport will probably occur, and this, too, should increase efficiency, especially in the maintenance and repair departments.

In view of these considerations, it seems a reasonable conclusion that road transport will not require a higher percent of the labor force than in the war years.

Shipping and Other Maritime Trades

The maritime trades, on the other hand, do offer opportunity for more than relative expansion. Development possibilities exist in each of three major branches: harbor and port activity, shipping, and fishing.

In 1939 the volume of dry cargo moved in ships was roughly 1.5 million tons, of which 1 million cleared through Haifa. Palestine's population in that year was 1,500,000. Under our assumption of maximum immigration, Palestine's population in 1954 would be 3.6 million. The volume of international trade for the 1954 population, assuming the 1939 per capita of international trade obtains, would be 3.6 million tons. Our assumption of a constant per capita errs on the conservative side. For while there will be a shift in the composition of imports, the shift will be toward bulkier and heavier commodities. Moreover exports, particularly of manufactured goods, must expand relatively beyond the prewar level, according to our previous analysis. In view of the limited possibilities of extending the Haifa port, a deep-sea harbor at Tel Aviv would be clearly indicated. The Tel Aviv port in fact would have to be even larger than the enlarged Haifa harbor, and, unless the Government stipulated to the contrary, the great majority of the workers would be Jews. The materialization of this prospect would increase the number of Jewish port workers from 2,000 in 1939 to between 5,000 and 6,000 in 1954. The Jewish Agency estimates that the construction of a deep-water port at Tel Aviv, ship repair facilities and transit storage sheds would entail a capital outlay of £P 2 million, presumably at prewar prices.

Jewish Palestine hopes to expand its very modest prewar beginnings in shipping. These initial efforts consisted of one company operating a combination passenger-cargo line between Palestine and southern Europe and another a coastal freight line between Egypt, Syria, Turkey, and Palestine. In accordance with our assumption of large-scale immigration, a large majority of European immigrants could be cleared through southern Europe; a shipping copany connecting southern and eastern Europe with Palestine would be assured of a sustained volume of traffic for most of the decade. This would be subject to the proviso that the requisite number of ships were acquired and placed into operation early in the postwar decade. This would be a costless way of entrenching themselves in Mediterranean shipping.

With respect to passenger traffic to and from the United States, Great Britain and western Europe, the Palestinian shipping interests would hope to serve as feeder lines to the major shipping firms of these countries. Similar arrangements for cargo are not feasible because of the cost of rehandling. Palestine's chief export to Great Britain and western Europe will continue to be citrus fruit. If the citrus were forwarded in ships, preferably refrigerated, of Palestinian registry, they could, of course, carry general cargo on the return voyage. The citrus season, however, is not continuous throughout the year, and export of general cargo originating in Palestine in the off-season could not provide for any considerable utilization of the fleet. At the moment, it is not clear whether these ships could participate in the carrying trade of other countries in the off-season.

Fortunately a decision on all counts need not be made at the outset since it will take 3 years for the citrus crop to attain even prewar levels. Since Palestine's need for this type of shipping will develop gradually over the decade, decisions can be made piecemeal in the light of accumulated experience.

Our previous analysis points to a very appreciable increase in exports of a variety of manufactured goods to Egypt, Lebanon, Syria and Turkey. This could provide the basis for a substantial expansion of coastal shipping.

To exploit all these possibilities would involve a capital outlay of £P 2.5 million at prewar prices, according to an estimate of the Jewish Agency, and would provide employment for a minimum of 1,500 seamen and 1,000 in shore services.

The fishing industry also has good expansion possibilities. Its development, however, will depend upon the use of modern techniques and the expenditure of considerable capital. These preconditions mean that the Jewish community must take the lead in developing the industry. In the prewar years Palestine imported more than 5,000 tons of fish in all forms, much of it being based on catches in the Mediterranean. Even after the planned expansion in Palestine's agriculture, there would still be a deficiency in meat protein, for which fish would be a substitute. By 1954 with its greatly augmented population Palestine may well need more than 10,000 tons of fish in addition to the 2,000 tons that have been provided by Palestinians fishing in the coastal waters and by the artificial fish ponds.

Both seas that touch Palestine, the Mediterranean and the Gulf of Aqaba, are regarded as capable of yielding much more fish than they do at present. The prize catches, according to Dutch specialists who visited Palestine prior to the war, are obtained by deep-sea fishing from trawlers provided with cold storage facilities and with motors of 250-300 HP. Boats of this character need return to their bases only once a week. A fleet of 30 such trawlers would employ about 500 fishermen and would provide a catch of about 5,000 tons. Presumably a fleet of similar size could operate in the Gulf of Aqaba. In addition to the deepsea possibilities, as many as 500 fishermen could profitably engage in coastal fishing and perhaps another 500 in boat building, netmaking, drying and conserving of fish.

To effectuate such a program, it would be necessary to establish fishing villages along the coast, suitable anchorages, and a central fishing base at Aqaba and in one of the bays between Haifa and Tel Aviv. At prewar prices the capital investment would amount to £P 1.25 million including the trawlers and the villages.

Air Transport

Civil aviation is bound to expand very appreciably beyond its prewar scale of operations. Part of the war's legacy to Palestine was greatly improved aerodrome facilities, although a number of the airfields could serve civil aviation only as emergency landing fields because of their location. Lydda, originally a modern airport, has been further improved by the military authorities and is now a first-class aerodrome capable of handling the largest transports. It very probably will continue to be the major Palestinian airport used by the airlines flying the international routes.

As in prewar years, Palestine will be a stopping point on four or five airlines connecting the United States and western Europe with the major cities of the Middle and Far East. Many other routes will be readily accessible by quick shuttle service to Cairo.

With the sharp reductions in risk and tariffs, air travel will be much more widely used by Palestinians than in the prewar years and will be an important factor in developing Palestine into a tourist and resort center.

There should be considerable airplane freight originating in Palestine if our prognosis of agricultural development is correct. It is expected that Palestine will be able to grow vegetables, fruits and flowers in the off-season, a part of which can be marketed as fresh produce in Great Britain and western Europe if shipped by airplane.

Within Palestine the developmental possibilities of civil aviation are severely limited by the smallness of the country. Even so, there surely would be sufficient express passenger traffic between Jerusalem and Haifa and Jaffa-Tel Aviv and Haifa to warrant regular scheduled flights. Such flights over the shorter distance between Jerusalem and Jaffa-Tel Aviv probably are a marginal case, particularly since the Jerusalem airport at Kallandia is some 6 miles beyond the city of Jerusalem.

There should be also much more demand for airline service between Palestine's major cities and the major cities of its neighboring countries in the Middle East. Our analysis of the probable development of manufactures suggests that Palestinian processed goods will assume an important role in Middle East trade. In this event, there would be need for speedy communication between the major commercial centers.

Air transport, however, is not a large employer of manpower. Even though the outlook for air transport in Palestine is bright, the employment of 750 Jews probably would be a generous estimate.

In 1943, about 3.8 percent of the gainfully occupied Jews were employed in transport and communication. If our major assumptions are fulfilled and the preceding analysis should be proved correct, perhaps 5 percent of the gainfully occupied in the Jewish community would be so employed.

The slowly rising per capita income of the Palestinian Arabs would probably result in the increase of their mobility within the country. This, in turn, might well involve the employment of a relatively larger number of Arabs in motor transport than were employed during the war.

Liberal Professions and Business Services

Despite our exclusion of financial and governmental services, the heterogeneity of the remaining occupations and industries included under service trades makes generalization extremely difficult. Even within the liberal professions the prospects are far from uniform. In the legal profession, for example, in view of the current overcrowding there is little need (nor likelihood, in view of the character of the immigrant potential) of the number of lawyers keeping pace with the increase in the labor force.

An analysis of the prospects in the medical profession is more complicated. An investigation prepared for the Hadassah Medical Organization disclosed that even 20 years ago the ratio of Jewish doctors per 10,000 Jewish population was twice as high in Palestine as the maximum registered in international statistics. Since that date the ratio has risen steadily to a nominal ratio of 42.5. After allowance for several factors, the effective ratio in 1942 becomes 33 compared with 13.3 in the United States, which has the second highest ratio in the world.

In the same study it is estimated that, in view of the morbidity rate and habits of the Jewish population of Palestine, the appropriate ratio for the maintenance of health is 18 to 20 doctors per 10,000 population. According to this ratio, two-fifths of the doctors are surplus, and they could care for an additional population of about 350,000. However, under our assumption of maximum immigration, the Jewish population in 1954 would have increased by 1,260,000 persons over the 1944 population, requiring about 1,800 additional physicians if the standard of medical care is to be maintained.

The recruitment of this number of Jewish physicians from the remnants of European Jewry will be extremely difficult. Even if a recruitment program of these dimensions could be fulfilled, the rate of increase in the number of physicians would be less than the rate of increase in the labor force. Only if medical care were organized for the Arab population, making extensive use of Jewish physicians (an unlikely achievement by the end of the postwar decade) could there be a relative increase in the number in the medical profession.

The fact that the present population of Jewish physicians is a comparatively aged group justifies the establishment of a medical school in Palestine now, but the age of the medical profession would not seriously reduce the ratio of doctors to population within the next 10 years.

Demand for architects and industrial and construction engineers probably will be sufficiently strong to lead to a relative gain in the numbers so engaged. With mass immigration, requirements of public works and housing will greatly exceed any past construction. Meeting these requirements will be dependent upon the availability of persons with appropriate professional training. The need to improve productive efficiency in order to survive international competition will provide many new opportunities to industrial engineers.

The drive to raise efficiency will also enlarge the scope of activities for accountants by making management more cost-conscious. The expected shift in the fiscal system from taxes *in rem* to taxes on income will also operate in the same direction. The demand for accountants, however, is more directly related to the number of operating establishments than to the size of the labor force. With the expansion of the internal market, we anticipate a trend toward larger operating units, and this might serve to limit the relative growth of the profession.

Other business services may well undergo a similar expansion. This might apply with special force to the neglected field of advertising. The conquest of the potential domestic and export markets may depend in no small part on a much more extensive and skillful utilization than in the past of marketing surveys and trade promotion through advertising.

There is still another field of business services with developmental prospects. It is the possibility that branch offices of Western firms, to serve the Middle East, now located in Cairo and Alexandria, might find it desirable to move to Palestine. While this outcome is even more uncertain than the other possibilities already noted, it should not be entirely discounted. Foreign offices and firms operating in Egypt have been subject to increasingly annoying regulations reflecting the intensification of Egyptian nationalist feeling. One set of accounting records, for example, must be kept in Arabic, and a specified percentage of employes must be Egyptian. A prospect dreaded by the foreign business community is the expiration of the Capitulation Acts in 1948. On that date, foreigners will no longer enjoy the privilege of the extra-territorial courts and will be obliged to rely on the uncertain justice of the Egyptian judiciary system.

In the latter event, it is quite probable that numerous foreign firms would prefer to locate in Palestine, where the court system is patterned after the British model. The major cities of Palestine are more centrally located than those of Egypt with respect to the entire Middle East. Palestine's land and sea communications are good. The level of education among Palestinian Jews is much higher than that among urban Egyptians. This would be mirrored in a corresponding increase in the efficiency of secretarial and clerical personnel in Palestine as compared with Egypt. Palestine, moreover, would be a more attractive place to live for Westerners who consider Western culture, as reflected in music, theatre, arts and the lecture hall, superior to what passes for native culture in the Middle East.

Cairo and Alexandria, on the other hand, have the advantage of providing locations at the site of the largest single market in the Middle East. It must be noted also that there are Westerners who are not troubled by living in a cultural vacuum and find oriental trappings attractive.

In the final analysis, the issue will be decided by the Egyptian nationalists. If nationalist excesses against foreigners should cause many of the branch offices to move to Haifa or Tel Aviv, this shift would create a substantial number of employment opportunities for white collar workers.

The possibilities of relative expansion in the field of education in the Jewish community will be conditioned largely by two factors. One factor obviously is the number of children of school age. In the absence of any firm data on the age distribution of potential immigrants, we have assumed implicitly that the relative number of children of school age among the new immigrants would about equal the comparable number among the immigrants of the 1930's. However, the ratio of immigrant school children to total number of immigrants is significantly lower than the ratio of all school children in the population to total population. Since, according to our assumptions, immigrants will form a much larger fraction of the total Jewish population in 1954 than they did during the war, the number of Jewish school children will increase at a slower rate than the total Jewish labor force. To provide education of the current type and character would entail the employment of relatively fewer teachers.

The other major factor would tend in the opposite direction. There is urgent necessity to improve current educational practices in the Jewish community in order to maintain, if not improve, the general productivity of its economy. The current educational system cannot be given much credit for the fact that the cultural and educational level of the Jewish community is high even by Western standards, for a very large fraction of the adult Jewish population came to Palestine after receiving their general, technical, or professional education elsewhere. The educational facilities now available for the Palestinian-born generation are inadequate to provide the level of education enjoyed by immigrant adults, even after allowing for the fact that the adaptation to the Palestinian scene requires considerable modification of the European education.

The inadequacies are both quantitative (in that too few children have received a secondary school education) and qualitative (in that there has been too little diversity in the occupations and professions for which training facilities have been provided). However, even after a decade of mass immigration the Jewish community would be too small and lacking in resources to provide training for all the skills and professions required by the community. For the more highly specialized education, arrangements should be made for the utilization of facilities abroad, particularly in Great Britain and the United States. Such arrangements would still leave appreciable scope for the extension of local educational facilities and correspondingly increase the demand for teachers.

If these two factors should prove to be the dominant considerations, the share of the Jewish labor force employed in education in wartime and at the end of the postwar decade would be about the same.

Even under our political assumption of internal peace it is unrealistic to expect that within so short a span as a decade Jews will be employed to teach in Arab elementary schools. Indeed, it is conceivable that there will not be enough Jewish teachers for the Jewish community unless training of teachers is begun very early in the postwar decade.

Tourist Trade

Prior to the war, tourist expenditures by Palestinians abroad greatly exceeded tourist expenditures by foreigners in Palestine. The net debit on this account amounted to £P 230,000 in 1936 and to £P 250,000 in 1939. (Figures prior to the 1936-39 disturbances, if available, presumably would show a smaller net debit.) For the Jewish community alone, the debit was still larger. During the war years there was a complete reversal. Palestinians, prohibited from traveling abroad, were forced to turn to the rest and recreational facilities within the country, while Allied soldiers stationed in the Middle East soon discovered that Palestine of all countries in the region was preeminently suited to provide rest and relaxation. It is necessary to consider whether Palestinians will again spend their vacations abroad, once free and cheap travel is restored, and whether it will be possible to develop Palestine as a health and resort center so as to attract civilian tourists from western Europe and the United States.

Before the war a large part of the travel abroad by Palestinian Jews consisted of visiting relatives in eastern and central Europe. In the first few years following the resumption of travel to Europe, undoubtedly many Palestinian Jews will travel to these same areas in a desire to locate surviving relatives. By the end of the postwar decade, however, a very large part of these survivors, by assumption, will have emigrated to Palestine. Even if our assumption proves to be wrong, it is unlikely that Palestinian Jews will have any lasting interest in passing their holidays in the countries where history's worst crimes against the Jews were committed. Thus the major prewar reason for tourist expenditures abroad by Palestinian Jews no longer will be operative.

These persons, as in wartime, will utilize the vacation possibilities offered by Palestine itself. Concentration on Palestinian vacations probably would occur without any qualitative improvement of the facilities. An expansion of facilities, however, would certainly have to be effected to accommodate the local vacationists in a Jewish population that will have doubled or trebled between 1944 and 1954.

An entirely new conception of the industry, however, must prevail to attract tourists from abroad on a basis that will be significant to the Palestinian economy. In the prewar years on the average some 35,000 foreign tourists visited Palestine annually. This is about equal to the number visiting Egypt. In Egypt, however, the average visit was two weeks and in Palestine but two and a half days. Frequently the Palestinian visit represented merely a brief excursion to tour the holy sites, during an Egyptian holiday, which profited the Palestinian economy but little. Those who visited Jewish Palestine all too often were subjected to a crowded propaganda tour from which the tired tourist was anxious to flee in a few days. This tactic must be discarded and thought given to the possibilities of developing health spas and resort centers.

By air, Palestine will be only one day's travel from Great Britain and two days' travel from eastern United States. This speed will make a Palestine holiday feasible even for those who can afford only two or three weeks for their vacation. Both British and American Jewry, moreover, have shown increasing interest in the Zionist effort as a result of its accomplishments and the tragic plight of European Jewry. Once convinced that Palestine can provide first-rate recreational facilities, a relatively large number of middle-class Jews in these countries could be induced to visit Palestine for a vacation and to observe the Zionist effort at first hand.

Despite its smallness, Palestine has considerable natural advantages that could serve as the basis for a tourist industry. Not the least of these is a salubrious and pleasant climate in one section or another for a minimum of six months—from the middle of the fall season to the latter part of the spring months. Its scenic beauty is of a high order and sufficiently diverse—seashore, hills, valleys, mountains and lakes—to have a wide appeal. Tiberias on Lake Tiberias, and Kallia on the Dead Sea, have spring or lake waters possessing, according to competent medical authorities, therapeutic qualities for circulatory ailments. Both areas, moreover, have typically a mild and balmy winter climate. All these attributes indicate that both localities could be developed into health spas and pleasure resorts that would rival those that formerly existed in Germany and once attracted a Jewish clientele.

In the spring months, the coastal plain—with ample opportunities for bathing and fishing, and abounding in citrus groves in blossom—offers obvious resort possibilities, as does Mt. Carmel overlooking the Mediterranean at Haifa.

Palestine's attractions for tourists are not restricted to its natural advantages. Its man-made attractions extending from antiquity to the present should also elicit considerable interest. Sites holy to three great religions, standing ruins from Biblical times or from the period of the Crusades, the novel forms of present-day communal living exemplified in the Kibbutzim and Moshvei Ovdim, the contrasts between the Arab and Jewish way of life in towns and villages—all should provide ample material for an interesting sojourn of several weeks.

Of special interest to wealthy Arabs of the region will be Jerusalem as the medical center of the Middle East. In many instances visiting Jerusalem will involve a convalescent period at rest homes in addition to medical treatment.

Primary to the development of a tourist trade is the erection of luxury hotels with a staff trained to cater to the needs of visitors. With the exception of the hotel at Kallia, there are none that would qualify as first-class resort hotels. Since very few Jews had been engaged in hotel management in Europe, it probably will be necessary to draw on outside experience. Another prerequisite, more easily supplied, is the organization of leisurely sight-seeing tours using the resort hotels as bases of operations. Once these preconditions are satisfied, an extensive advertising campaign, preferably with Government participation, would also be necessary.

The importance of the industry to the economy should not be measured merely by the numbers directly engaged. The tourist trade could provide a significant supplementary market for the produce of mixed farming, the handicraft shops, and the fashion goods industry and enlarge the audience of entertainers and artists.

Internal peace is of cardinal importance if Palestine is to realize the potentialities of its tourist trade. Of equal importance is the deflation of its cost structure at least to the point where it is no higher than costs in the competing resort areas of Europe.

Internal Trade

While Zionism has accomplished much in reducing the importance of the petty trader in Jewish economic life, nevertheless even in wartime 11 percent of the Jewish labor force was engaged in commerce. In relative terms this represents a slight decline from 1939, although the absolute number employed in wartime was virtually identical with the prewar number. Will the factors that are likely to be operative at the end of the postwar decade have the effect of increasing the efficiency of the distribution process, or will trade remain the domain of the small shopkeeper, peddler, and hawker? If the former seems probable, the relative numbers absorbed will be further reduced.

In the light of our assumptions, what are the factors that would have an expansionist effect in relative terms? Increased purchases per capita in the Jewish community are excluded by assumption since it has been posited that there will not be any rise in per capita income. The opposite, however, is assumed for the Arab community. In the larger towns this very likely will result in increased purchases by Arabs in Jewish-owned stores, particularly clothing stores and stores dealing with building materials and installations.

It is also probable that the mass immigration will create a sufficiently large internal market to justify a much greater articulation of function between importer, exporter, wholesaler, and retailer. However, the very same factor—enlarged internal markets—should serve to promote larger retail establishments in the form of chain stores and department stores. Such a development would reduce personnel requirements per unit of sales. Of special interest in this connection are the beginnings of a chain department store system recently initiated by the Hamashbir Hamerkazi. Individual consumers' cooperative stores cannot afford to carry a full inventory of textiles, footwear and related articles. Accordingly, in the large towns and colonies, where there is a concentration of consumers' cooperatives, the Hamashbir Hamarkazi has established retail stores (Hamashbir Latzarkhan) dealing in these articles and serving members of all cooperative societies in the community. The Hamashbir Hamerkazi regards these shops as a nucleus for a system of department stores to be developed together with the consumers' societies. The tie-in with the consumers' cooperatives, however, probably means that their development will not be a rapid one.

It is also probable that the postwar immigrants will be a much more impoverished group than the prewar one and relatively fewer, therefore, will be in a position to establish themselves even as petty retailers. Thus the major source of new entrants will be partially blocked off.

The distribution of the new immigrants within the country will, of course, influence the volume of job opportunities in trade.

The greater the concentration of population in the major cities, the fewer will be the jobs created because of the excess capacity that exists in these cities. Also, the greater the number settled in the communal villages (Kibbutzim), the less effect the additional population will have on the development of trade. It is likely that both of these forms of settlement will occur more often than absorption by creation of new towns and villages on a non-communal basis.

On balance these broad considerations suggest that the continued development of Jewish Palestine will entail a further reduction in the percent engaged in commerce. It might well involve a reduction from 11 percent in 1943 to (say) 9 percent in 1954.

SUMMARY

1. These broad considerations suggest that if our assumptions are satisfied, transport, services, and trade will continue to employ in 1954 about the same share, about one-third, of the Jewish labor force as in the war years. The relative number employed in trade is expected to decline significantly. A partial offset is provided by the anticipated relative expansion in transport, particularly in the maritime trades. Additional expansion is also expected in the service professions and trades. While the relative demand for teachers will be constant, the demand for engineers will compensate somewhat for the relative decline in the other liberal professions. It will be necessary to realize the developmental possibilities in the field of business services and tourist trade to provide another substantial offset for the relative decrease in trade.

On the assumption of maximum immigration, the Jewish labor force in 1954 would number about 750,000. If our analysis is correct, about 250,000 would be employed in transport, trade and services.

2. In the Arab community, the probabilities are quite different. Despite a continued shift of Arabs from rural to urban areas and a slightly higher standard of living, relative expansion in trade is not expected. This is precluded by the existing overcrowding and excess capacity. Aside from a small relative gain in motor transport, the only fields of relative expansion would appear to be in the professional services, particularly teaching and medical care. Both services are woefully inadeqate; too few receive the services due to lack of facilities, and the quality of the services is of a low order. With a development-minded government and a slowly rising per capita income, these services are bound to increase in scope, requiring many more teachers and doctors.

Despite the tremendous need, the expansion within the first postwar decade must be limited. Even where training facilities are well established—which is not the case in Palestine—the acquisition of a professional training is a time-consuming process. Unlike the Jewish community, the Palestinian Arabs cannot count on the immigration of Arabs with professional training. More likely the Arabs who will be attracted to Palestine will be more impoverished and possess even less education and skill than the Palestinian Arabs. Within the decade, therefore, the Arabs will be able to make only the merest beginnings of establishing themselves in the liberal professions. It is to be hoped that teaching—at the least, elementary teaching—will be a partial exception.

CHAPTER 28

FINANCIAL AND FISCAL PROBLEMS

PRICE LEVEL READJUSTMENT

As has been indicated repeatedly in this volume, the general level of prices in Palestine is now badly "out of line" with prices prevailing in the United States and the United Kingdom.

PRICES IN PALESTINE AND OTHER COUNTRIES

	Wholesale prices			*Cost of living*		
	Palestine	*U. K.*	*U. S.*	*Palestine*	*U. K.*	*U. S.*
1939	100	100	100	100	100	100
1944	319	161	135	242	126	126

Price levels in continental Europe and in the Middle East are generally even more badly out of line with prices prevailing in the United States and the United Kingdom than are Palestine's prices.

COST-OF-LIVING INDICES IN MIDDLE EAST COUNTRIES

	Palestine	*Cyprus*	*Lebanon*	*Egypt*	*Iraq*	*Iran*
Prewar	100	100	100	100	100	100
September 1944	249	230	560	288	377	798

Source: *General Bulletin.* Due to various defects in the construction of the indices and to the local character of markets, these indices are valid only in broad outline.

The fact that other Middle East and European countries have an even more inflated price level than that of Palestine, however, hardly affects the profound price readjustment that Palestine must make. Palestine's agricultural exports must compete in United Kingdom and western European markets; it does not help sales in London or Stockholm that prices are high in Bagdad or Teheran. Palestine's diversified manufactures will have to compete in Middle East markets (including Palestine itself) with products from the United States and the United Kingdom, not with the products of Egypt or the Lebanon.

Inflation and temporarily acute supply shortages have weakened the competitive position of many countries formerly important in Middle East trade—Czechoslovakia, Austria, Italy, Germany, and Japan. The withdrawal of these competitors affords temporary shelter to Palestinian manufacturers. It means that the readjustment of the Palestinian price level can be a slower process than would be necessary otherwise. These countries too, however, will gradually reassume at least part of their former export position. They will offer goods for sale in international trade at prices competitive with those offered by United States and United Kingdom exporters. This is the level to which Palestinian prices of internationally traded commodities must readjust.

The objectives of Palestinian price level adjustment must be to achieve such prices as will permit both full employment and the maximizing of her gain from international trade. Palestine must be able to export the agricultural and industrial products in which she has natural advantages and special skills. She must be able to import goods of which she is not an efficient producer. Moreover, if at all possible, her industries that will face foreign competition must be enabled to reduce their prices without the customary deflationary experience of business losses and unemployment. An economy in the throes of a deflationary crisis is in no position to offer employment to new immigrants.

If the United States alone be taken as representing the "world price level" to which Palestine must readjust, allowance must be made for the exchange depreciation of the £ and the £P. From 1938 to the wartime level, the £ and the £P fell in exchange value from about $4.89 to $4.035 (or 82.5 percent of the 1938 level). Moreover, examination of the present prices in the United States of internationally-traded commodities suggests that the long-term postwar level of these prices, in terms of dollars, is likely to be at least 25 percent higher than the prewar level. For these reasons, Palestinian prices need not go back to the prewar index level of 100. Palestine's price level would be in about the same relative position with respect to the United States as it was in 1938 if her price level (in £P) were deflated to about 150 (125 divided by 82.5 equals 151).

The greater part of the inflation of Palestine's price level may be attributed to the direct and indirect consequences of the high prices she has had to pay for her imports. While her cost-of-living index stood at 242 in 1944 and her wholesale price index at 319, the index of the cost of her imported food, drink and tobacco stood at 422, imported raw materials at 306, and imported manufactures at 409 (all 1939=100). To the extent that these import prices return to lower levels, Palestine's costs will fall, and her prices can fall without any downward pressure on real incomes. Wage supplements, paid on the basis of the cost-of-living index, will decline with the index.

The sequence in which imports become available from overseas is very important. If basic foodstuffs, fodders, raw materials and industrial equipment become available first, Palestinian farmers and manufacturers will be in a position to prepare themselves to withstand foreign competition in processed foods and manufactures. On the other hand, to the extent that processed goods become available before raw and intermediate products, a crisis can hardly be avoided in Palestine. Since the inflated price structure was built up within a framework of Government controls, Government has a special responsibility to administer the relaxation of those controls in such a way as to avoid any unnecessary dislocation.

Even should imports of basic foods, fodders, raw materials and equipment reach Palestine in substantial volume before the inflow of competing final products, Palestine's price readjustment will not be easy. Considerable advances in production techniques have taken place in Western countries in recent years; Palestine will find these hard to match in a short time. The admonition to "increase efficiency" is easier to give than to follow. An increase in efficiency will be particularly hard to achieve if Palestine has a large inflow of unskilled immigrant labor. Under these circumstances, a reduction in basic real wages—below the level that they have reached during the war—will probably be necessary in all branches of agriculture and industry that have to meet foreign competition.

Before a reduction in real wages becomes necessary, however, the economy has two other cushions that can absorb a substantial part of the necessary price reduction. The larger of these cushions is the very high profit margin earned by Palestinian business during wartime: very substantial reductions can be made without rendering operations unprofitable. A lesser—but still important—source of lower costs would be reduction in customs and excise charges on fuels and materials for further processing and elimination of the many Government business fees, license charges and stamp taxes. These reductions in profit margins and costs would strengthen the competitive position, but it is very unlikely that they would obviate a reduction in real wage rates.

As has been shown above (page 238), basic wage rates in Palestinian Jewish manufactures were 45 percent higher, on the average, in July 1944 than in 1939. These basic rates are *without* cost-of-living allowances or supplements for overtime. In July 1944 straight-time hourly wage rates * were 43 percent higher than in 1939 in the United Kingdom and 52 percent higher than in 1939 in the United States; corrected for the devaluation of the pound, the United States' wage rates would be 84 percent higher than in 1939. At first glance, changes in basic wage rates appear to have impaired Palestine's competitive position only very slightly as compared to the United Kingdom and not at all as compared to the United States.

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*Without correction for the changed industrial distribution of employment in all countries.

This first glance is profoundly deceptive. Palestine's basic wage rates must be adjusted for her unique system of cost-of-living allowances. In July 1944 cost-of-living allowances accounted for 47.2 percent of total wage payments in Jewish manufactures. Even if, as argued above, world prices in Palestinian pounds fall to about 150 percent of prewar (i.e. 125 percent of prewar in United States dollars), cost-of-living allowances would still be very important in the Palestine wage structure. There are no such allowances in the United Kingdom or the United States. This factor radically transforms the competitive position of the three countries so far as wage costs are concerned.

At a representative Palestinian Jewish basic wage in manufactures of £P 0.475 per day, and a cost-of-living index of 150, cost-of-living allowances would impose a heavy burden on Jewish manufactures. Basic wages for a month of 25 working days would total £P 11.875, but the cost-of-living allowance would be an additional £P 4.650 (50 percent of £P 8.5 + 20 percent of £P 2.0). Cost-of-living allowances would constituted a 39.3 percent supplement to basic wages and would make up 28.1 percent of the total wage bill. At this cost-of-living allowance level, representative Palestine wage costs would be 102 percent higher than prewar, while British costs would be only 43 percent higher and United States costs (taking account of devaluation) 84 percent higher. The shift away from wartime employments, with the accompanying reduction in wages in non-war as compared to war industries, will be greater in the United States and United Kingdom than in Palestine: this factor will add to Palestine's disadvantage in peacetime competition. Differential progress in productivity during wartime must also be presumed to have accentuated Palestine's disadvantage. Finally, Palestine's disadvantages will be heaped up to the breaking point if she has to absorb a large volume of unskilled immigrant labor at prevailing trade union wage rates.

Protests concerning high wage rates have hitherto been stronger in Palestine among agricultural employers (particularly citrus growers) than among manufacturers. This difference reflects the immediate eagerness of citriculture to recapture United Kingdom and western European markets. It does *not* reflect a greater comparative wage disadvantage in citriculture, as compared to manufactures, in long-term competition with foreign suppliers. Wages of day-labor employed in Jewish agriculture rose from about 200 Palestine mils in 1939 to 700 mils in 1944 and even higher early in 1945; these wages include cost-of-living allowances. Calculating the cost-of-living allowance on the same basis as in manufactures, the implicit basic wage in 1944 was under 210 mils (compared with 475 in manfactures). Assuming a decline in the cost-of-living index to 150, agricultural wage payments would fall to about 155 percent of the prewar level. At this level they will have declined greatly compared to agricultural wages in the United States and United Kingdom.

Agricultural wage rates have risen in the United States from an index number of 100 in 1939 to 258 in July 1944 and 285 in July 1945. Minimum wage rates for adult males in British agriculture rose from 100 in August 1939 to 187 in August 1944 and 216 in August 1945. Since the United States and the United Kingdom agricultural wage rates do not include a special cost-of-living element, they will offer more resistance to reduction than Palestinian wage payments. Moreover public policy is broadly favorable to stability in agricultural wage rates in the United States and United Kingdom, while it may be sympathetic to a decline in Palestine. For these reasons, agriculture is likely to be the one occupation in which war influences will have permanently raised wage rates in the United States and United Kingdom more than in Palestine. This affords small consolation to Palestine growers who are trying to export fruit now when prices (and wages) are still inflated. It suggests, however, that in the long run Palestine's food exports should have a decided wage advantage, as compared to prewar, in competing with American and British producers in United Kingdom and European markets.

There are too many uncertainties in our basic information and in the outlook for international trade and price trends to make it possible to *demonstrate* conclusively that increased imports deflation of profits, decreased Government charges, etc.—all together cannot suffice to readjust Palestine's price level to the extent necessary. Yet, on the basis of such information as is now available and such projections as seem justified, it seems *probable* that these factors will not be enough.

Several British and American economists have concluded that the appropriate measure to bring about a readjustment of the Palestinian price level—after taking advantage of all other deflationary factors—is a controlled devaluation of the foreign exchange value of the Palestinian currency. Normally a devaluation improves the profit position of all industries under foreign competition. It stimulates exports by increasing the value, in domestic currency, of sales abroad. It discourages imports by reducing the value, in foreign currency, of sales in the devalued currency. It raises (or counteracts a fall in) domestic prices and—in so far as debt charges, rents, royalties, and wages remain fixed—profitability is improved.

The general case for devaluation as an instrument of international price level readjustment is, however, of less force in Palestine under present circumstances than it would be normally. It is true that devaluation is normally a stimulating force because it reduces the real burden of domestic debts, but this factor is of comparatively little importance because Palestinian industry and agriculture have a lighter debt burden today than ever before. It is true also that devaluation tends to reduce the real burden of rents and royalties—both those involved directly in land and those paid indirectly in the purchase of domestically produced materials—but this factor is also of comparatively little importance in Palestine: Palestine is characteristically a country of imported raw materials and of either low land rents (in the Jewish economy) or rents that are dominantly a share of the produce rather than a fixed sum of money (in the Arab economy). It is true, finally, that devaluation normally reduces real wage rates by raising prices while wages, which tend to be "sticky," do not rise to the same extent; however, the Palestinian system of cost-of-living allowances negates this common relationship. Due to the system of cost-of-living allowances, a reduction in real wage rates cannot be brought about by indirect means.

For these reasons, we can assign very little efficacy to devaluation—in the present circumstances—as a technique for bringing the Palestinian price level into line with world prices. If, as seems likely, after all other instruments of price reduction have been exhausted, a further reduction of costs is required, that reduction will have to be achieved by a reduction in wage rates (or, what is the same thing, an elimination of cost-of-living allowances). Otherwise Palestine will be unable to maintain and expand her export industries; she will be unable to compete, in her own market, with foreign goods produced at lower unit labor costs. Inability to compete with foreign products will mean business losses, unemployment, and the gradual reduction of wages under the pressure of privation. Under such a slow deflationary readjustment, the absorption of new immigrants will be gravely impeded. The readjustment of Palestinian prices needs to be thorough and quick. The prolonged deflation of the 1920's must not be repeated.

In discussing this question with responsible leaders of the Histadruth, we encountered a response which may be paraphrased in the following way: "Our goal is to give Jewish—and Arab—workers in Palestine a standard of living comparable to that of British and American workers. We recognize, however, that the road to that goal is a long, hard one. We are laboring people, but we are also Zionists. We do not make our standard of living a condition for Jewish immigration into Palestine. Even if it prove necessary—so that we may bring more Jews into the country—for us to work for two shillings (40 U. S. cents) a day, we will do it."

An important part of the solution of the problem of price level readjustment in Palestine seems to us to lie in the responsible implementation, by the Histadruth, of the implications of the policy indicated by the above statement.

MONETARY RECONSTRUCTION

If the argument advanced above is sound, at least in its broad outline, a reduction in the foreign exchange value of the £P is not likely to prove very helpful in bringing Palestinian prices into line with world prices. In adopting this conclusion, however, we do not wish to give any aid or comfort to the superstitious fear of devaluation that is so prevalent in Palestine and elsewhere in the Middle East. A fixed system of foreign exchange relationships, while of considerable convenience, cannot be erected into a major objective of monetary policy.* Should the alteration of the parity with sterling be required to maintain an expansionist fiscal and monetary policy needed for full employment, the alteration should be adopted.†

A shift in domestic Palestinian monetary policy is required if monetary instruments are to be used as aggressively as possible in facilitating economic development. The instrument for that shift in policy is at hand in the Palestine Currency Board. Without any spectacular preliminaries, the P. C. B. could gradually be converted into a development-minded Central Bank. The duties of the P. C. B. could be enlarged, step by step, from mere exchange of currency to (a) offering credit facilities to Government, (b) centralizing the holding of foreign exchange reserves for the whole economy, (c) acting as the agent of Government in financing housing, agriculture and industry, and (d) serving as the final source, regulator and guarantor of credit for the whole economy.

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*For a general statement of the basic issues involved, see *The Economics of Control*, by A. P. Lerner, N. Y., 1944 especially Chapters 28 and 29.

†Due to her possession of foreign exchange assets at least ten times as great as her liabilities, Palestine is in a position to compensate all windfall losses from devaluation by a small tax on windfall gains.

At their 1945 peak, the sterling reserves held by the P. C. B., as 100 percent cover for the Palestine currency, will be of the order of £50 million. As hoarding of currency diminishes and prices fall, currency in circulation will, first, contract and the foreign exchange reserves of the P. C. B. will shrink. Thereafter, however, a contrary trend will set in. As population and economic activity expand, currency requirements will rise. Even assuming that prices (in £P) fall to half their present level, currency requirements at the end of a decade of large-scale immigration may well be higher than in 1945.

At present the reserve for the Palestinian currency consists 100 percent of sterling assets. There is no reason why this reserve should not gradually be replaced, in substantial part, by £P assets. The P. C. B. can buy and hold obligations of the Palestine Government, of public corporations, of quasi-public institutions, and of sound business firms. A very conservative estimate of the amount of credit that might be made available to the Palestinian economy from this source over the next decade, without *any* change in the monetary system, would be £P 25 million. In Palestinian dimensions, this is no small sum: it is equal to four-fifths of the prewar total of the annual national income. This change in monetary practice must, however, not be thought of as a thing that can be accomplished over night. No monetary system can operate smoothly without public confidence, and the public needs time to accustom itself to new departures.

Due to the peculiar character of the Palestine monetary system, every £P advanced to Government or private business by the P. C. B. would mean an almost equivalent reduction in its foreign exchange reserves—though not in the foreign exchange holdings of the whole economy. As in any other country, a large part of any net additional expenditure is used to buy local resources: only a fraction "leaks" into imports and may cause a net loss of foreign exchange to the economy as a whole. However, with the present Palestinian monetary mechanism, any advance by the P. C. B. would result in a substantial shift of foreign exchange to the private banks. The direct effects of advances by the P. C. B. would be: (a) a net increase in currency in circulation, (b) a net leakage of exchange through imports, and (c) a net increase in cash assets (and deposit liabilities) of the private banks. Only (a) would not drain the foreign exchange reserve of the P. C. B. Factor (b) would mean a net expenditure of foreign exchange by the economy. Factor (c) would mean a shift in foreign exchange reserves from the P. C. B. to the private banks: the banks would present their additional cash to the P. C. B. in exchange for sterling deposits in London.

The transfer of reserves from the P. C. B. to the private banks need not be undesirable in so far as the banks use their increased funds to finance Palestinian business, to purchase Government of Palestine securities, or to constitute a reserve of liquidity to meet the claims of their depositors. However, there are two reasons why it may be desirable gradually to concentrate the liquid foreign exchange reserves of the economy increasingly in the hands of the P. C. B., acting as a Central Bank and Exchange Stabilization Fund. These reasons are: (1) under current practice, a large part of the foreign exchange "picked up" by the large foreign banks operating in Palestine is not used in their Palestine business principally because the economic development of Palestine is not their exclusive (or even primary) interest, and (2) the current diffusion of foreign exchange reserves in the holdings of several banks increases the total size of the reserve required to maintain exchange stability.

The present mechanism, whereby reserves are diffused and advances by the P. C. B. would result in an almost equivalent reduction in its reserve, could be corrected very simply. It might be required that all banks hold on deposit with the P. C. B. an amount equal to their holdings in non-Palestinian assets.* This would mean no regulation of banks' conduct of their business within Palestine, but any bank that wished to export capital would have to place an equivalent amount on deposit with the P. C. B. Alternatively the bank might be allowed to invest an equivalent amount in Government of Palestine securities. In either case—while leaving the private banking system under much looser control than that of the United States and many other countries—at least half of the loss of the P. C. B. reserves that would otherwise result from private banking capital exports would be eliminated. The P. C. B. would be placed in a much stronger position to serve Palestinian business and Government.

It is impossible to specify the exact amount of credit that might safely be advanced to Government and business, by such an institution as a transformed Palestine Currency Board, during the next decade. The general economic criteria that should govern the expansion and contraction of credit are (a) the level of employment, (b) the trend of prices, and (c) the character of the international balance of payments. Of these, (a) is by far the most important; no other economic end can have sufficient value for the long-period income of an economy to justify its attainment at the price of a prolonged sacrifice of full employment. So long as an economy contains a substantial reserve of unemployed resources, a judicious policy of monetary expansion will be helpful. On the other hand, it must be appreciated that monetary expansion can serve only as an instrument for maintaining the *general* level of investment and expenditure; it cannot solve *particular* problems of inefficiency or scarcity of specific limiting resources.

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*It should be emphasized that Palestine banks are not required by law to hold any reserves with any publicly-designated institution at the present time.

After full employment, comparative price stability and the maximizing of Palestine's fruitful internationl economic relations must be basic considerations in her monetary policy. International trade is very important to Palestine: her monetary authorities must always consider the repercussions of their policies on her international competitive position. Moreover Palestinian economic progress will require a considerable inflow of capital and enterprise from abroad. Monetary policy must contribute towards the creation of an expanding economy which will attract such inflow.

The character of monetary institutions is misconceived both when it is presumed (a) that they create resources for investment and (b) that they have no real significance in determining how much an economy invests and how fast it grows. Whatever can be done can be financed; whatever cannot be done otherwise, cannot be accomplished by some financial sleight-of-hand. The amount that the Palestinian economy *can* invest during the next decade, from new savings, depends on the productive power of the economy and on the willingness to limit consumption to meet investment goals; but whether those productive resources are *used* depends, in large part, on monetary institutions, and the desired level of savings may be attained partly through monetary controls. The amount that the Palestinian economy *can* invest during the next decade, from its present sterling balances, depends on whether real goods will be available for purchase with those balances; but whether a large part of those sterling balances are *used* at all depends on the practices of the Palestine Currency Board, and on the controls established with respect to the foreign holdings of the private banking system.

In short, the character of monetary institutions does not—at any moment—determine what real resources are available for production. The character of such institutions does, however, in large part determine whether such resources are fully used and for what purposes they are used; thereby the monetary institutions help to determine the quantity of real resources that will be available to the economy over time. In the past, Palestine has failed—like other countries—to create monetary instruments adequate to assure the full use of her resources. This failure has been due largely to the absence of an aggressive, formulated development policy. The time for such a policy, and for the creation of effective instruments for its implementation, is at hand.

We do not believe that the Palestinian monetary system can be transformed over night from an "automatic" sterling-exchange mechanism to a full-blown managed system. Palestinian bankers rightly warn against any such rapid change. The first step in the gradual reconstruction should, no doubt, be the extension of credit to the Government of Palestine by the Palestine Currency Board. Next, the P. C. B. might undertake to rediscount trade bills for private banks. As needed, in pursuance of its responsibility for exchange stability and an expansionist monetary policy, the P. C. B. might undertake to centralize the foreign exchange holdings of the economy. As the agent of Government, the P. C. B. might act as guarantor of certain classes of credit advanced by private banks for agriculture, housing and other enterprises especially affected with a public interest. In accordance with Treasury policy, it might purchase the securities of public corporations and quasi-public institutions. When the Government of Palestine raises large foreign loans for development, the P. C. B. might act as disbursing and controlling agent. In this manner, the P. C. B. could be transformed gradually, as needed, into a development-minded Central Bank, acting as a major instrument of public development policy. All this must be, at best, a slow, experimental growth.

BANKING CHANGES

On the whole, the private banking system of Palestine (see Chapter 19) seems to us to have served the country comparatively well. Within the framework of a public monetary and fiscal policy geared to development needs, the private banks can continue to perform very valuable services. Several changes in current banking practices would, however, appear to be desirable.

The first of these changes relates to current practices in paying interest on customers' credit balances. It would appear desirable to abolish interest on demand deposits and establish maximum interest limits on time deposits. The payment of interest on customers' demand balances increases the cost of all bank credit; it contributes indirectly to raising the level of all interest rates. Interest paid on deposits became a particularly heavy burden on the Palestinian banking system during the war years. In 1944 the ratio of bank credit outstanding to total deposits was only 24.0 percent. With so low a level of earning assets, the practice of paying interests on deposits constituted a serious barrier to further reduction of interest charges on loans, advances and discounts. Even in normal times, when the ratio of earning assets is higher, interest on deposits constitutes a heavy cost.

Moreover, especially in an economy determined to use all of its resources for expansion, savers need to be discouraged from believing that they can combine extreme liquidity with a substantial return on their savings and freedom from equity risks. Savers need to be encouraged to invest their funds in individual enterprises, in marketable equities, or—at worst—in long-term private obligations. Failing an adequate flow of funds (and their use) in these private channels, only public and quasi-public institutions will be in a position to finance economic development. The commercial bank—with its liabilities in demand deposits and its assets in cash and short-term loans—can play only a secondary role in economic development.

Where the private banks are left free to determine their own policies with respect to interest payments on deposits, small and weak banks tend to attract depositors by offering high interest payments. In the competition to attract depositors, larger banks are drawn into the same policies. In this way, a vicious circle is established that can be broken only through Government regulation.

Elimination of interest payments on demand deposits and the limitation of interest payable on time deposits would tend to draw business away from the smaller banks. This would probably be a desirable trend. The 25 commercial banks (apart from mortgage banks and credit cooperative societies) that Palestine has today are far too many for the volume of banking business required by a poor community of some 1,800,000 people. An authorized capital of £P 50,000 and a paid-up capital of £P 25,000 are hardly enough to conduct a modern banking business. The Government of Palestine is reluctant to eliminate more existing banks (as it did in the late 1930's) by again raising the minimum capital required for engaging in the banking business. It would seem desirable, however, at the very least, to guard against further overcrowding the field with small, weak banks by establishing a much higher capital requirement for new banks. In view of the present overcrowding, we would suggest a minimum paid-up capital requirement of about £P 150,000 as being perhaps of the right order of magnitude.

A more fundamental issue than the absolute amount of capital required to engage in the banking business is the proper ratio, under Palestinian conditions, of banking equity capital (including accumulated profits) to deposit liabilities. In all countries, banking institutions are confronted with a fundamental dilemma. Their first obligation is to meet the claims of their depositors. But their earnings, and their services to the community, are dependent primarily on the amount and character of the credit that they grant. How far are they justified in extending risky credit? Should they limit their assets to short-term "self-liquidating" paper? Can they be said to be derelict in their duty to the community if they do not make certain kinds of loans for agriculture, housing and industry?

In the United States until recent decades—and even more recently in continental Europe—public deposit banks financed every kind of enterprise and held assets of every period of maturity. Banks with such practices were in a position to create credit to finance rapid spurts of economic progress, but they—and their depositors—suffered severely from every fluctuation in the level of economic activity. More recently the range of banking risks has been greatly narrowed. Banks have shifted the risk-bearing function largely to Government. Government has emerged as lender to agriculture, housing and industry. Where the Government is not lender, it is often guarantor. In either case, the private banking system's earning assets become increasingly—in fact, if not in form—Government bonds. Government, acting through its central bank, maintains these bonds at par. Government in fact pays the banks interest for creating money (the polite deposit money, not the rude currency money). So far as the general public is concerned, the services of the private banking system are increasingly limited to acting as a safe warehouse for cash and as a collecting agency for handling payments by check.

This trend for Government risk-bearing to become increasingly more important as compared to private banking risk-bearing seems to us to be irreversible. As Governments increasingly accept final responsibility for the level of economic activity, an enlarged role for Government—even in financing private enterprise—seems inevitable and desirable. Only Government can afford to unbalance its own accounts in an effort to balance the economy's accounts. But a role for private banking, beyond the most passive, *does* remain if banks will strengthen their equity capital position sufficiently to enable them to take equity risks. Only if banks have sufficient capital of their own can they afford to play a dynamic role in development. If Palestinian banks are to be in a position to contribute importantly to the economic growth of the country during the next decade, they must have a high ratio of capital assets to deposit liabilities.

TRANSFORMATION OF THE REVENUE SYSTEM

Even the best public revenue system cannot assure full employment, an expanding economy, rising per capita incomes or any other comprehensive economic objective. Public receipts (unlike public expenditures) do not supply driving force to an economy. The public revenue system acts rather as a complicated system of brakes. It affects the speed and direction of economic development and thereby—in the long run—has important consequences with respect to the capacity for development, but it is not a source of motive power. Even as a braking mechanism, a revenue system—though it can act powerfully—can exert its force only generally and gradually. Where specific, detailed and rapid adjustments are needed, other controls are required.

Despite these limitations, modern nations are gradually coming to test the efficacy of their revenue systems by more fundamental criteria than were common formerly. The revenue system of a modern State is required to make its contribution not merely to balancing the books of the public Treasury but also to balancing the books of the whole economy. It is increasingly recognized that a public revenue system should be designed:

(a) To contribute to the full employment of the national resources and to the stability of the price level by withdrawing a large share of total purchasing power when resource use is full and a small share when resources are idle: to this end, revenue policy should be formulated with specific regard to its impact on spending and saving,

(b) To distribute the burden of Government levies with consideration of the resulting size of individual and family incomes after taxes,

(c) To use the tax mechanism to check undesirable economic activities or undesirable concentrations of economic power.

By these criteria, the Palestine revenue system does not come out very well. A glance at the Draft Estimates of Receipts for 1944-45 indicates the reasons.

The taxes included in the first 4 items of the table on p. 609, which account for about 72 percent of the total revenue, are of a character to unstabilize the economy by taking a larger share of a small national income than of a large one. The receipts under items (6) and (7), which account for 11 percent of the total, are substantially neutral so far as stabilizing influence is concerned. Only item (5), accounting for 17 percent of the total revenue, consists of taxes of a character to promote full use of resources by withdrawing little purchasing power when incomes are low and to promote price stability by withdrawing much when incomes are high. It is entirely consistent with a tax system of this kind that Palestine Government revenues were too high in the peace years (when resources were idle) and much too low during the war (when inflation roughly tripled the general price level).

DRAFT RECEIPTS OF THE PALESTINE GOVERNMENT, 1944-45

(1) Customs	£P 3,608,000	27%
(2) Excise	2,157,500	16
(3) Taxes on land, property and agriculture	2,181,000	16
(4) Licenses, fees and fines	1,655,450	13
(5) Income tax	2,250,000	17
(6) Income from government property, loans and investments	1,025,100	8
(7) Income from post, telegraph, telephone, harbor and rail (net)	345,097	3
(8) Grant-in-aid from the United Kingdom	134,048	
TOTAL	£P 13,356,195	100%

Source: *Draft Estimates of Revenue and Expenditure,* published by the Government of Palestine, Jerusalem, 1945.

By the same token, Palestine Government revenues are not collected to any significant extent in accordance with ability to pay. Customs duties are imposed on articles of mass consumption, on building materials, or on items like fuel that raise the cost of all production. Excises are collected on matches, salt and cement, as well as on alcoholic liquors and tobacco.* Taxes are levied on the property and livestock of the humblest Fellah, in spite of the fact that, in normal times, the Fellaheen are so miserably poor that they ought not, in our judgment, to pay *any* taxes. Taxes are imposed on urban land and property, despite the need for lower housing costs, for no better reason than that such taxes are traditional and easy to collect. (It is true that a Financial Secretary of the Palestine Government has explained that these land and property taxes are payments to the Government in exchange for its services in providing security of land and property, but this justification is no more impressive than that of a European Finance Minister who justified the tax on doors and windows as a payment to Government in exchange for its services in securing the integrity of doors and windows.)

The Palestine revenue system is particularly thoroughgoing (and, in our judgment, perverse) in its adherence to the idea of so-called "benefit taxation," i.e. the idea that the individual consumer of Government services—often more or less imaginary—should be required to pay for those services, irrespective of the size of his income or the economic consequences of requiring such payment. The official estimates for 1944-45 enumerate 14 groups of licenses and 33 groups of fees—mostly charges for doing various kinds of business, but also fees for attending schools, using hospitals, immigration, quarantine, etc.

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*It must be emphasized that even the latter two commodities are "necessities" in the economists' sense that the demand for them is inelastic, i.e. a small percentage increase in price causes a less than equivalent decrease in sales.

A constructive innovation was made by the Government of Palestine in 1945, when it introduced taxation of capital gains from sales of land and real property. Such gains were made taxable, with a rate of 50 percent for gains on sales of land held up to one year, 40 percent on land held from one to three years, 30 percent on land held three to five years, 20 percent on land held five to seven years, and 10 percent on land held seven to ten years; gains on sale of land and real property held for ten years or more were left entirely free. Speculators in land have hitherto reaped large gains merely as a result of the general growth of the country; there is no reason why these gains should not accrue to the public treasury. It must be recorded, however,—in appreciation of the difficult position of the Government of Palestine in matters of fiscal policy—that all vocal sections of the Palestine population have attacked this taxation of capital gains as a great oppression, a discrimination against the Jewish population, a burden on the Arab landowner, etc., etc.

One objection to the taxation of capital gains from land which has some weight is derived from Palestine's inflated general price level. If land was bought at £P 10 per dunum in 1939 and sold at £P 30 per dunum in 1944, while the price level tripled, it may be argued that the seller had a nominal capital gain of £P 20, but his £P 30 were worth no more in 1944 than £P 10 in 1939. This is a complicated matter, but the validity of the argument is seriously undermined by the consideration that the proceeds of land sales are not used primarily for current expenditure and may properly be evaluated at a long-term price level lower than the 1944 one. Since in any case the "unearned increment" is not taxed at 100 percent, a crude implicit allowance for a permanent rise in prices may be said to have been made.

A more serious objection is that there is no valid ground for taxing capital gains from land and leaving all other capital gains free. In the long run, this argument seems to us to be quite incontrovertible. Capital gains are income to the individual. So is inheritance. The equitable method of taxing them is to integrate capital gains, capital losses and inheritance with income, subjecting the total to a single progressive tax scale and permitting incomes to be averaged over several years. Yet time and priority may reasonably be argued in support of the step taken by the Government of Palestine. Income taxation is still new in Palestine. Taxation of capital gains, offsetting of losses, taxation of inheritance, averaging of income—all these are still novelties even in countries with greater administrative resources than those of Palestine. Particularly in view of the scarcity of land in Palestine and the large volume of speculative activity in land, the Government of Palestine seems to us to have been amply justified in proceeding first with taxation of capital gains from land sales. A more comprehensive taxation of capital gains and inheritance would be even better, but we must beware of making the best the enemy of the good.

Progressive Income Taxation

In our judgment, the Palestinian revenue system needs to be transformed so thoroughly that what is now last would become first and what is now first would become last. Taxes on agriculture and rural property ought to be given up first. Taxes on urban property, "fees" for land registration, and other similar levies ought to be given up as rapidly as the administration of progressive levies on income, capital gains, and inheritance can be perfected. Customs duties should be preserved only in so far as required by considerations of protection or as a weapon of commercial policy; they should not be the basic source of general revenues. Excises on salt, matches and cement should be given up soon, and excises on tobacco and liquor should be dropped as soon as income taxation has been expanded and perfected. Licenses and fees should be retained only to the extent that Government performs services for individuals and firms in which the community has no general interest—and the charges imposed should be no more than are required to meet the cost of the services rendered.

The first step required in the transformation of the present revenue system is the expansion of the individual income tax. The total amount assessed on individuals in 1943 was £P 1,213,215 or 1.35 percent of the National Income. In contrast the amount of individual income tax paid in the United States in the fiscal year 1943-44 was $18,261,000, or 12.17 percent of the average National Income in the years 1943 and 1944. In Palestine only 25,226 persons (including 17,527 Jews, 4,937 Arabs and 2,762 others) were assessed as being obligated to pay income tax; this amounted to about 1.6 percent of the official 1943 population. In the United States about 40 percent of the total population paid individual income tax in 1943 and 1944. The United States now has an individual income tax of something approaching the order of magnitude required to make elastic, progressive taxes central in the revenue system; Palestine has not.

The essence of the matter lies in the large exemption and the low initial rates of the Palestinian individual income tax. The Palestinian exemption for a married couple is £P 300, or about 5.3 times the average per capita income in 1943. In contrast the United States exemption for a married couple is $1,000, or about nine-tenths as large as the average per capita income in 1943. Palestinians who defend their high rate of exemption are prone to advance the sophistical argument that even couples with incomes of £P 300 are really poor and cannot afford to pay direct taxes. The really poor in wartime Palestine have been those individuals and families with average per capita incomes of under £P 50; it is they that a progressive tax system is designed to protect. When a couple earning £P 300 in 1943 paid no direct taxes, the really poor had to pay instead, and they did pay—in customs, excises, property taxes and other indirect levies.

We estimate that in 1943 about 450,000 families and single individuals (perhaps 170,000 Jewish and 280,000 other) received income in Palestine. The 25,226 families and single individuals who were assessed to pay individual income tax therefore accounted for only 5.6 percent of the total consuming units. We suggest that, at periods of full employment, a desirable peacetime individual income tax for Palestine should aim at reaching eight or nine times as large a percentage of the total consuming units, roughly 45 percent or 50 percent of the total. A broadly based individual income tax is particularly necessary in Palestine because she is so poor in capital that she may well desire to restrain consumption and encourage saving. At wartime income levels, a broadly based income tax might permit exemption for a couple with a non-working wife of about £P 105, for a couple with a working wife about £P 140, and perhaps £P 35 for each child. (With postwar price declines, assuming full employment, exemptions would have to fall proportionately.) Some exemptions could also be allowed for extraordinary medical expenses, expenditures on education, and charitable contributions to recognized institutions. With 45 percent or 50 percent of the consuming units subject to tax, perhaps 65 percent to 80 percent of the total individual income would be received by taxable individuals. This is a sufficiently broad base to make the elastic, progressive element central in the revenue system and still exclude the really poor.

However, if the individual income tax is to play a constructive role in the transformation of the revenue system, the reduction in the exemption is not enough. The initial bracket rates must also be raised. The following is the present schedule, on income above the exemption limit:

Bracket of taxable income	£P 1-300	301-600	601-900	901-1,200	1,201-1,600	1,601-2,600
Rate that applies	5%	7.5%	12.5%	20%	32.5%	50%

After the limit of £P 2600 of taxable income, there is a surtax which makes the combined rate the following:

Bracket of taxable income	£P 2,601-3,100	3,101-3,600	3,601-4,600	4,601-5,600	5,601-
Rate that applies	55%	60%	65%	70%	75%

We raise no objection to the schedule above the £P 1600 limit;* indeed, we think it quite likely that a decrease of 10 percent in each bracket rate above £P 1600 might well be desirable in a peacetime economy that desires to encourage individual savings. However, we suspect that—if Government is to provide a modern level of public services—the initial bracket rate would have to be raised to at least 15 percent, and the subsequent brackets up to £P 1200 would have to become at least 17.5 percent, 22.5 percent, and 30 percent.

We would emphasize, however, that the exemptions suggested above are cited only as of something like the correct order of magnitude for a period of full employment. In periods when substantial under-utilization of resources is imminent, exemptions should be raised, revenues allowed to drop, and as wide a program of expenditures as possible financed out of borrowing—especially borrowing from the Government's own monetary institutions. As long as there are substantial idle resources, price declines rather than price rises are to be feared, and as utilization of resources again approaches capacity, Government financing can again be switched over to greater reliance on taxation and towards the elimination of borrowing.

There is fortunately considerable sentiment in Palestine in favor of taxation of estates or inheritances, though there is also considerable opposition, particularly from the great Arab landed families. Taxation of estates or inheritance is particularly valuable in a democratic society because it provides the minimum brake on enterprise and yet acts effectively as a barrier to the concentration of economic power that saps the vitality of a democratic community. Since Palestine does not yet have any taxation of this kind, she may be able to avoid the blind alley into which other governments have walked through approaching the problem from the point of view of taxing the estate. Where estates are taxed, the tendency is necessarily to consider every estate as if it were being left to a large number of helpless children: naturally the exemption from tax must be high enough to provide for this case of greatest hardship. Where inheritance is taxed, however, it is possible to make the ordinary income tax allowances for income status. It would not, of course, be fair to consider inheritance as income in a single year, but averaging of bequests over a period of ten years (for example) might permit the integration of inheritance with income. An individual receiving an inheritance of (say) £P 1,000 might be required to add £P 100 to his individual income each year for ten years in calculating his individual income tax liability. Through a technique of this kind, inheritance taxation can become a very important and relatively stable element of a revenue system.

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*However the schedule needs to be made effective by stopping the formation of personal corporations.

EXPANSION OF PUBLIC SERVICES

Some of the largest areas of public financing—those requiring investments or one-time, non-income-earning outlays—have been reviewed above. They include care of immigrants, irrigation works, power development, intensification of farming, low-cost housing, building of schools, port and railway development, etc. If there is to be large-scale immigration, some public financing will be required in each of these fields. Quasi-public expenditures in the same fields will require Government assistance and coordination.

As indicated in Chapters 23 and 24 above, much public expenditure on current account will be required in irrigation and agriculture apart from the capital investment for irrigation and equipment of more intensive farms. If the country is to make full use of its water resources, Government must take a more active part in water research, where the load is now being carried primarily by private bodies and Jewish national institutions. Comprehensive research is required in geological structure and topography, rainfall, stream flow, percolation, evaporation, water requirements of principal crops by regions, etc. In agricultural research, the work of the Jewish Agency station at Rehovot needs to be enlarged and supplemented. Requirements are very great: more comprehensive soil survey; regional study of the adaptability of crops; introduction and testing of types and breeds from countries in similar positions; pest control; agricultural by-products and the use of agricultural surpluses; storing, packing and shipping methods; export markets for vegetables, fruits, flowers and seeds in which Palestinian production has natural advantages; industrial plants that can be grown intensively on limited areas.

Beyond and even larger than the work of agricultural research is the work of agricultural education and demonstration. The two advanced agricultural schools operated by Government in Palestine today (one for Arabs and one for Jews) together received an average of less than £P 6,000 per year from the Government in the six fiscal years 1938-39 through 1943-44. Elementary agricultural education, demonstration and extension work have as yet had almost no impact on the methods of the Fellah farm. Even Jewish agricultural training, though in touch with scientific knowledge, is still very backward. Throughout the country, an enormous long-term job needs to be done in teaching general care of animals and plants, particularly care of irrigated cultures. Model Fellah farms need to be established all over the country, and the Fellah needs to be shown—in practice, and in detail—how he can profit from converting his own farm gradually into an approximation or adaptation of the model. In spite of the necessity for new developments in Palestinian market-oriented agriculture, this popular dissemination of what is already known by experts might well be more important in raising the general level of Palestinian farming than anything that may be achieved even by the most realistic research.

Afforestation is similarly dependent on public initiative. Despite the universal admission that Palestine needs afforestation, the Government of Palestine has hitherto made very little progress. This is not a matter of research, though varieties better suited to Palestinian conditions than those now known may be found; it is a matter of funds. In the six years 1938-39 through 1943-44, the Government made net expenditures (after deduction of proceeds from sales and licenses) of less than £P 24,000 per year on afforestation. Private initiative cannot be relied upon. Though planting of farm wood-lots for farm use, involving almost no cost because done when the farmer would otherwise be idle, may be quite profitable, there is no convincing evidence that comprehensive afforestation in Palestine can be done as a business proposition. This consideration should act as a check on the enthusiasm of those Zionists who ask for an afforestation program to cover 2,250,000 dunums and involving a cost (at prewar prices) of the order of £P 25 million. Even at best, the population of Palestine will be very modestly supplied with housing, education, and community services during the next decade. In the measure in which these objects of expenditure are alternative, afforestation cannot be accorded a high priority.

Some confusion has been introduced into the discussion of afforestation in Palestine by the error of regarding it as a specially flexible kind of public works, which can be useful in taking up any temporary slack in other employment. In fact, under Palestinian conditions, there are at most three months in which trees can usefully be planted. Even assuming an economic development during the next decade of stability and consistency not paralleled in the experience of other countries, Palestine will need much more flexibility in her public works expenditures than can be achieved by relying principally on variations in outlays on afforestation. If the expenditures (as well as the receipts) of the Palestine Government are to be adjusted to the objectives of contributing to full employment and price stability, variations in total Government expenditures from good to bad years will have to involve differences of several million pounds.

Government officials in Palestine have been devoting considerable thought in recent years to extending public assistance for the poor and aged and developing a system of insurance for health and unemployment. The budget of 1944-45, for the first time, accorded direct recognition to the problem of public assistance. Progress in social insurance cannot be rapid so long as the cleavage between the Jewish and Arab communities remains profound. With present income differentials, a unified Government system of social insurance would inevitably—and rightly—involve subsidization of the Arabs by the Jews. For this reason, the Jewish community has tended to press for Government grants-in-aid to assist its own (Histadruth) health and unemployment insurance schemes, rather than for the formation of a single Government system. On the other hand, since Arab organizations for social purposes are either non-existent or consistently unwilling to tax themselves to match Government grants for welfare purposes, the Arab sector will remain without any form of social insurance unless such insurance is organized by Government.

Much the same situation prevails with respect to health services. As stressed repeatedly above, in no other respect is the contrast between Jews and Arabs more sharp. The Jewish standard of child care, as measured by the incidence and severity of children's diseases, is better than that of the United States. The Arab standard is primitive. The standards of general sanitation and personal cleanlines are also extremely far apart. The Arab village woman, taking her child to the doctor, sees nothing incongruous in the fact that even its face has not been washed for several days. But we must beware of concluding that these things have anything to do with "racial" differences or even individual intelligence. The oriental Jews are identical in these matters with their Arab neighbors.

The standard of Arab health cannot be raised quickly by merely appropriating additional funds. Organization and personnel are tighter limiting factors than finances. The Arabs need more and better doctors, dentists, and nurses, but they will not commonly utilize the services of Jews; no neighboring Arab country has a surplus in these professions; and no Western country (with the possible exception of the U.S.S.R.) is able to induce its professional medical personnel—in significant numbers—to go to work among backward peoples. Comprehensive, long-range planning of public health services for Arabs is in order now. A reasonable target for such plans might be to raise the Arab standard of medical services, in 25 years, to the level now enjoyed by Palestine Jews. Such an objective should have very high priority in its claim on public funds. It should receive every support from the Jewish community, as a practical step in carrying out the Jewish objective of bringing about a convergence in Arab-Jewish living standards by raising the Arabs to the level of an advanced Western society.

Most basic of all the public services, however, from the point of view of social and economic progress, is education. It is there that Palestine—particularly Arab Palestine—is most backward. Even Jewish Palestine does not today have an educational system entirely adequate to maintain and extend the cultural and professional heritage of a Western people, but the Jews *do* have a sufficiently high standard of literacy and general education to maintain a well-informed, critical, progressive, democratic society. The Arabs are too illiterate and uneducated to have anything more than a sham democracy; so long as their general education is so deficient, it is also impossible for them to make more than limited progress in health or in the development of those mechanical and professional skills that are basic to modern economic progress.

As emphasized repeatedly above, the backwardness of Arab education persists in spite of the fact that the Arabs get their full share—and perhaps more than their full share—of Government education expenditures, on a per capita basis. (The Government grant to Jewish schools for 1942-43 was based on the estimate that the Jews had 27.42 percent of the children aged 5 to 15, while the Jewish Agency claimed 30.18 percent.) In 1942-43 about £P 375,000 was spent on the public education of 292,000 Moslem and Christian school-age children; of this amount, over 95 percent was contributed by the Government of Palestine. About £P 820,000 was spent on the education of 88,000 (Jewish Agency estimate) Jewish school-age children; of this amount, only 11 percent was contributed by the Government of Palestine. The Jews had more and better education than the Arabs. The Jews paid for the difference themselves.

Nevertheless the fact remains that only about £P 1.285 per non-Jewish child of school age was being spent on education in the year 1942-43. The full significance of this meager expenditure can be grasped only when it is appreciated that in 1942-43 the official Palestine cost-of-living index ("prewar"=100) varied between 232 and and 248. It would surely be an exaggeration for an American reader to translate the services purchasable in 1942-43 with £P 1.285 into $5.

During 1942-43 less than 32 percent of all Moslem and Christian children aged 5 to 15 attended school of any kind. This total includes British and other non-Arab children in Palestine as well as Arabs. The Moslem and Christian children who did in fact attend school benefited from a per capita expenditure only about two-fifths as large as the amount spent by the Jewish community on the children in Jewish schools.

Experience shows that even the most prosperous Arab municipalities will not tax themselves sufficiently to support schools. Arab parents will not pay school fees, in significant amounts. By and large, the Arab community welcomes education only as a gift. They have too little experience of education to set any very high value on it.

Were we responsible for the establishment of the budget of the Government of Palestine, we would set an immediate target of quadrupling the annual current per capita outlay on education as rapidly as the requisite organization, personnel, and facilities could be mobilized. We would aim first at a six-year course of universal elementary education, with smaller classes, better-paid teachers and no elementary school fees. To that end, we would expand the training of teachers, provide maintenance scholarships for persons interested in teacher training, and attract capable young people into teaching by giving them every possible indication of a rapidly expanding educational system. We would open night schools for teaching reading and writing to adults. At the same time, we would not neglect secondary and advanced education. We would look seriously into the project of making Palestine the seat of an English university for the whole Middle East. If the U.S.S.R., with its great multiplicity of languages and cultures, could convert a people approximately 80 percent illiterate in 1914 into one only 20 percent illiterate a quarter century later, the same can be done in Palestine. It is notable also that, while devoting all due attention to the elementary education of the masses, the U.S.S.R. did not find it necessary to neglect higher technical scientific and cultural education.

EMPLOYMENT IN FINANCE AND PUBLIC SERVICES

In 1943 about 12 percent of the total Palestine gainfully employed were engaged in finance and public services. Over 17 percent of the Jewish population were so engaged (3.3 percent in finance, 3.1 percent in police services, and 10.8 percent in other public services). With expanded Government initiative in social and developmental services, the importance of such employment in the total occupational structure may well rise. However the pattern is not sufficiently well-established to justify detailed projection.

For the Jewish population alone, the importance of employment in finance and public services is suggested by the following table.

OUTLINE OF JEWISH OCCUPATIONAL STRUCTURE

(*In percent of labor force*)

	Actual employment in 1943	*Projected employment in 1954, on lower immigration limit*	*Projected employment in 1954, on upper immigration limit*
Agriculture	13.2	15.0	12.0
Manufactures	25.6	21.0	19.5
Construction*	9.2	11.0	11.6
Transport, trade and private services	32.0	33.0	33.0
Finance and social services	17.2	17.5	17.5
Other	2.8	2.5	2.5
TOTAL	100.0	100.0	96.1

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* Assumes even spread of construction over decade; includes irrigation and power construction at 1.5 percent to 2.0 percent of labor force.

No great significance should be attributed to the fact that employment accounts for 100 percent of the total Jewish labor force on our lower immigration limit but only 96.1 percent on our upper limit. The discrepancy reflects the fact that a pattern of full employment is more probable, on our assumptions, with immigration something below the upper limit. With still higher immigration, these projections would yield unemployment above the 5 percent of labor force which we have indicated (Chapter 22) as a danger signal. But we must warn our readers that our error of estimate is certainly far greater than this small discrepancy.

CAPITAL REQUIREMENTS

The following table is a summary statement of the capital requirements outlined in the preceding chapters:

CAPITAL REQUIRED FOR PALESTINIAN ECONOMIC DEVELOPMENT IN THE POSTWAR DECADE

(*In millions of £P, at prices 150 percent of 1935-1939*)

	With a Jewish immigration of 616,000	*With a Jewish immigration of 1,125,000*
(1) Immigration services	38	68
(2) Irrigation	16	29
(3) Power installations	27	41
(4) Agriculture	59	73
(5) Manufactures	35	50
(6) Housing	198	265
(7) Other construction, transport, trade and services	100	147
TOTAL	473	673

Assumes non-Jewish immigration equal to 10 percent of total. (1) Entirely services to Jewish immigrants. (2) Excludes irrigation installations on farms, which are included in agriculture. (3) Based on all hydro-electric; installation costs for thermal power would be lower. (4) Includes irrigation installations on farms and farm buildings. (5) Entirely for Jewish manufactures; includes factory buildings. (6) Without temporary housing included in immigration services. (7) Excludes items of construction given above; includes allowance of £P 15 million to £P 20 million for inventories in wholesale and retail trade.

The values entered in this table of requirements are based on the general formula of supplying sufficient capital to assure a constant average Jewish standard of living (at the prewar level) and to provide the conditions for a rise over the decade of perhaps 20 percent in the Arab standard. By these criteria, the estimates can not be said with confidence to have either a low or a high bias. Several factors tend to make them minimum. First, we have allowed for only three months (average) maintenance for immigrant family groups and adult individuals; if immigration is more concentrated than we have assumed, a longer non-income-earning period would result. Second, due to deficiencies of data, we have made no estimate of capital requirements for non-Jewish manufactures, though they accounted for about one-sixth of total manufacturing employment in 1943. In a period of rapid Jewish immigration, Jewish industry will surely grow more rapidly than other; consequently the maximum understatement in the manufactures total on this account is perhaps 10 percent. Third, we have omitted any estimate of capital required for equipment (as opposed to construction) in services and trades, except in a few cases for which special information is available. Fourth, we have provided capital for irrigation but have made no allowance for soil amelioration and have treated afforestation as a current expense. Fifth, while we have allowed for working capital required in agriculture, manufactures and trade, we have made no such allowance for services. Sixth, we have not allowed for mis-directed investment, though in so large and rapid a growth there are bound to be many errors. These factors contribute to making our total a minimum.

There are, however, also factors leaning in the other direction; these tend to make our capital requirements adequate for a higher income than we have stipulated. First, since the expansion of the irrigated area up to an additional 1,750,000 dunums would bring lower unit water costs, farm incomes would rise. Second, our capital requirements for Jewish farming are based on "full equipment"; this also would tend to make agricultural incomes rise above the prewar level, when farms were underequipped. Third, after adjustment for a higher rate of utilization, we have stipulated that 10 percent more capital per worker in manufactures would be required than the average for 1936; this increase would contribute to raising productivity and incomes. Fourth, we have recommended that Arabs be employed on Jewish construction, at Jewish wage rates, and have allowed for a corresponding rise in Arab wages and construction costs. Fifth, while doubting that much of Palestine's electricity development in the next decade will be based on water power, we have based our capital requirements estimates on high hydroelectric installation costs, for lack of any others. These factors tend to raise our total above the minimum.

On balance, the probable error in our estimate seems to us to be clearer than its minimum or maximum bias. Due to the many necessary crudities in our estimating technique and to the uncertainty of many factors, an error of 20 percent seems not at all unlikely. In that case, the capital required on our lower immigration limit should be expressed as roughly £P 388 million to £P 568 million, rather than £P 473 million; the capital required on our higher limit should be expressed as roughly £P 538 million to £P 808 million, rather than £P 673 million.

Such allocation of the total capital requirements between Jews and non-Jews as we are able to make suggests that on our lower immigration limit Jewish development would require about 69 percent of the total outlays; on our higher limit, Jews would require about 77 percent of the total. (The percentage assigned to non-Jews would, however, not be realized without a very great improvement in the standard of Arab housing.) For Jews alone, the midpoints of our estimates would be £P 326 million for an immigration of 616,000 and £P 515 million for an immigration of 1,125,000.

The only detailed and comprehensive estimate from a Palestine source is limited to the Jewish sector and, for that sector alone, comes to a higher total. That estimate was prepared by Dr. Ludwig Gruenbaum.

Dr. Gruenbaum's estimates differ from ours at a great many points. He disregards the cost of transporting immigrants to Palestine and omits the maintenance of orphaned or separated children. He provides for a much greater concentration of the Jewish occupational structure in manufacturing and diversified farming than we believe probable. He also provides a higher level of all kinds of equipment, a less modest standard in housing and other construction, and lavish expenditure on afforestation.

CAPITAL REQUIREMENTS FOR THE JEWISH ECONOMY WITH A GRADUAL JEWISH IMMIGRATION OF 1,000,000, ACCORDING TO L. GRUENBAUM

(Converted into £P prices 150 percent of prewar)

(1) Immigration services	£P 28,950,000
(2) Irrigation and power	75,000,000
(3) Agriculture	70,350,000
(4) Afforestation	38,250,000
(5) Manufactures	102,000,000
(6) Housing	222,000,000
(7) Other construction, transport trade and services	110,100,000
TOTAL	£P 646,650,000

Source: Dr. L. Gruenbaum, *Outline of a Development Plan for Jewish Palestine*, Jerusalem, August-October 1944 (unpublished). Based on a 12-year development, with a terminal Jewish population of 1,888,000, compared with our maximum of 1,826,000 after 10 years.

From the point of view of the Jewish sector alone, land acquisition is properly included as a capital cost. The Jewish economy will require capital for "export" to the Arab economy in exchange for land.* As indicated above (Chapter 24), even with very severe price control Jews will have to pay £P 7.5 million to £P 12.0 million for the agricultural land that they will need to buy during the next decade. An amount of something like the same order of magnitude will be required for the purchase of non-agricultural land. (These additions would bring the Jewish capital requirements totals to £P 341 million and £P 539 million). But at prices like those prevailing in 1944 the land might well cost four times as much. Moreover, due to the high prices of good irrigable plain land, agricultural development may be forced along a difficult, unproductive path. Urban development may also be seriously hampered. Control over land prices, and the securing of adequate land transfer for development purposes, will be among the most important issues of public policy during the next decade. In view of this situation, it is extremely unfortunate that all sections of the Palestinian community have taken so negative a position on the Government's initiative in taxing capital gains from the sales of land and real estate.

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*The Arab economy will also have to do some exporting of capital to pay for land owned by absentee landlords residing in the Lebanon, Syria, and elsewhere.

SOURCES OF CAPITAL

Sterling Balances

At the end of the war in Europe, Palestine had about £ 125 million of sterling assets. (These assets were rising at the rate of 1½ or 2 million pounds per month.) Even under the best of circumstances, however, not all of this £ 125 million will be available for investment in Palestine. Unless exchange rate stability is to be sacrificed or exchange controls adopted*, an amount of the order of £ 25 million or £ 35 million will probably have to be held at the end of the next decade, even with efficient monetary management, as a currency exchange reserve. Provision for this reserve would bring the available portion of present sterling balances down to about £ 90 million or £ 100 million.

Some Palestinian economists hold the view that a large part of her sterling balances is likely to be dissipated to meet the consumption demands of the present Palestinian population during the postwar transition. We regard this view as quite without foundation. There will, no doubt, be some making up of deferred consumers' expenditures on imported durable goods, but we can see no reason to believe that there will be net dissaving. Having only a very limited technical reconversion problem and an excellent market outlook in the Middle East, Palestine has a very good chance of maintaining relatively full employment. With full employment, there will be no net dissaving but, on the contrary, considerable net additional saving. The outlook for increased saving (including in saving the purchase of housing) becomes even more assured if we take into account the boom conditions certain to result if there is large-scale immigration and corresponding capital inflow. We therefore see no reason to make any allowance for dissipation of sterling balances through an excess of consumption by the present Palestinian population.

It is suggested also, by the same group of Palestinian economists, that much of the existing sterling balances is needed to replace stocks and equipment used up during the war. So far as replacement in the strict sense is concerned, we are extremely skeptical of this analysis. Stocks in Palestine at the end of 1944 may have been a couple of million pounds (in prewar prices) smaller than at the outbreak of war, but the net addition to real industrial and agricultural equipment was several times as large as this inventory deficit. Over the whole span of the war years, there has been (excluding construction) considerable real net investment in Palestine. It is true that firms have earned large wartime depreciation allowances and have set aside funds which may be listed on their books as "for replacement". From a general economic point of view, however, replacement will be insignificant in the use of these funds compared with improvement and expansion.

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* I.e., new exchange controls limiting the convertibility of £P into £.

Very large issues are involved in the question whether British controls will in fact permit Palestine to use her balances to purchase goods and services. Gradual utilization, over as long a period as a decade, seems likely to be permitted. On this assumption, we enter an amount of the order of £P 90 million to £P 100 million as probably available for development purposes from the use of Palestine's sterling balances as they stood at the end of the war in Europe. Should these funds in fact not be made available by British trade and exchange control, Palestinian economic development would be greatly limited.

Domestic Net Savings

According to the estimates of the Government Statistician, Palestine made net savings equal to 16.9 percent of her National Income in 1942 and 14.4 percent in 1943. In our judgment, due to excessive depreciation allowances, understatement of prices received for agricultural products, concealment of profits, etc., the actual savings ratio was probably even higher than these estimates suggest. The same high savings pattern prevailed in 1944 and early 1945. While these savings were accompanied by a standard of living much more modest than that of Britain, the United States, or other Western countries, they meant little dire hardship. Due to the very high rate of employment, fewer families suffered extreme want than was common in prewar years. The Jewish community enjoyed a higher standard of living than the average available, for instance, to the people of the U.S.S.R. even before the outbreak of war.

On the other hand, all available evidence indicates that no domestic net saving was accomplished in Palestine in the 1930's. Immigrants brought capital into the country, part of which they found it necessary to spend on consumption before they were able to earn enough for their current needs. Jewish national funds also brought capital into the country most of which was used—directly or indirectly—for current consumption (including social services). Employment was not sufficiently full nor were incomes sufficiently high to enable the economy to invest all the capital brought in from abroad and to make an addition to the total invested out of new savings of its own.

What can reasonably be expected in the postwar years? In discussing this question with representative Palestinians, we encountered a dominant pessimism. Most Palestinians—and, in particular, responsible spokesmen for the Jewish community—were not counting much on domestic net savings. This pessimism was especially peculiar when it came from those planning for a large immigration. Despite their conviction that there is room in Palestine for many more immigrants, their development plans stress the transitional excess of immigrant consumption over income more than the subsequent capacity to earn and save. Quite naturally, those who are most committed to rapid immigration give least weight to domestic saving, since only over many years can such saving be of great significance.

For a gradual immigration, however, and given appropriate public policy, domestic net saving can be a very important factor. Immigration, if accompanied by some capital inflow, will guarantee comparatively regular employment. The real incomes of the present Palestinian population, who are "on the ground floor," should rise substantially. The non-Jewish population will surely be in a position to save. Consistent with constant average Jewish incomes, income differences among Jews will increase; the volume of savings available at any total income level will therefore rise. Immigrant Jews will not characteristically be in a position to finance as great an excess of consumption over income as many of them could in the 1930's.

Money spent on services to immigrants will not, in the strict sense, be invested, but it will go to meet the "capital" requirements of development in the sense in which we have dealt with capital requirements above. Consistent with this usage, resources utilized for immigrant services should not be regarded as consumed but rather as invested. How large a contribution can Palestinian domestic net savings be expected to make to "investment" requirements in this extended sense?

By the end of 1944, the national income of Palestine was running at an annual rate of about £P 70 million, in "postwar" prices 50 percent higher than 1939. Assuming constant per worker income for Jews at the 1936 level (adjusted upward only for price changes) and a slow rise in non-Jewish incomes to a level 20 percent above 1936, Jewish income per worker in 1954 would be £P 156 and non-Jewish income per worker in the same year would be £P 100.8. By the end of 1954, national income would be running at an annual rate of about £P 137 million on our lower immigration assumption and about £P 173 million on our higher assumption.

To aim at investing 15 percent of the national income is not an overly severe target for an economy devoted to a development goal and determined to use all its resources to achieve that goal. Were Palestine to save 15 percent of her national income during the next decade, she would be in a position to make available over £P 150 million on our lower immigration assumption and over £P 180 million on our higher assumption. Yet in all candor, it must be stipulated that Palestinians are not today thinking in terms of domestic savings of this order of magnitude. Therefore, unless galvanized into new activity, they are not likely to devise the consumption controls that will be necessary to achieve such a level of saving. Moreover the few Palestinians who have confronted this issue seem to have concluded that, in view of the binational structure of Palestinian society, it will be impractical to establish the control mechanisms necessary to achieve so high a ratio of saving. One forward-looking banker and a responsible Jewish economist concurred in suggesting about half of our indicated total, say £P 75 million to £P 90 million, as about the practical limit. Unless Palestinian society will undertake to save an amount of this minimum order, projects involving joint international and domestic financing must necessarily be of very limited scope.

Immigrants' Capital

As has been indicated above (in Chapter 20), the capital brought in by immigrants was by far the most important source of funds for Palestinian development in the prewar years. In the years ahead too, no doubt, some Jews with capital will migrate to Palestine. Yet, due to the fact that few Jews in the Western countries are at present interested in going to live in Palestine, it is impossible to foresee a capitalist immigration that would remotely parallel that from Europe in the 1930's.

European Jews will have capital to take to Palestine during the next decade only if they receive adequate reparations in a form that can be converted into exportable assets. The other Jewish communities which are likely to furnish considerable numbers of Palestinian immigrants consist primarily of very poor people. Nevertheless, in a gradual immigration, immigrants' capital need not be a negligible factor. Over the years, most immigrants will perhaps be in a position at least to meet their own transportation expenses, and a few will bring sizable amounts. We have however no basis for estimating the amounts that may be involved.

Foreign Private Investment Funds

Some foreign private investment funds might be available to Palestine for expansion in manufactures, electricity, housing, and other private construction and services. The volume of such capital is, however, easily overstated.

Due to British exchange and trade controls, a basic distinction must be drawn between *supplying funds* and *supplying resources*. It is the latter that Palestine needs; the former is, at best, merely an offset to poor domestic monetary policy. For instance, a British insurance company may "supply funds" for housing by purchasing Palestinian mortgages; this transaction, however, contributes nothing to the Palestinian economy unless the sterling furnished by the British company can be used to enlarge the net volume of Palestine's imports. Even dollars from the United States are functionless in exactly the same way if they go merely to enlarge the general British sterling pool, emerging in the Palestinian economy only as funds with which to finance an inflation, not as real resources with which to produce real expansion. Particularly in all matters of British financing, it must be considered whether such financing would be *in addition* to the release of Palestine's own sterling resources or merely *in substitution* for such release. In the latter case, there is presumably a net loss to Palestine rather than a gain.

In manufactures, for which foreign capital would be most available, it is least needed. Palestinian industry has accumulated reserves and profits adequate for a considerable expansion. Individuals who have saved during the war, particularly traders and professional people, have already shown that they are willing to invest in industrial preferred stocks or debentures or in investment trusts that in turn hold these securities. Palestine's banks are in a strong position to finance industrial short-term working capital requirements (always presuming that they can use their London balances).

The activities of foreign investors in Palestinian manufacturing will be constructive more in the measure of the specialized skills and general entrepreneurial ability that they bring to Palestine than in the measure of the funds they make available. In almost all manufacturing fields, foreign capital will find domestic capital that is willing to contribute funds to joint ventures. The expansion of the Consolidated Refineries will no doubt be financed entirely by foreign capital. A British manufacturer of tin cans has given strong indication of intention to erect a branch plant in Palestine; this venture also may be financed wholly with foreign capital. New ventures in tires and tubes, building materials, and petroleum byproducts, on the other hand, may well be joint foreign-domestic enterprises. Foreign investment corporations, particularly the Palestine Economic Corporation (American) and the Palestine Corporation, Ltd. (British), have taken steps to enlarge their capital so that they can extend their activities. Successful Jewish businessmen in the United States, Britain, South Africa, Egypt, and other countries have shown renewed interest in Palestine. This interest rarely extends to willingness to become permanent Palestinian residents, but it may involve participation in the management and financing of new manufacturing enterprises.

This importation of foreign manufacturing skills and capital would be reduced to the vanishing point by political strife. Under favorable political and economic conditions, however, something of the order of £P 10 million of private foreign funds might be attracted into Palestinian manufacturing during the next decade. Such an amount would be roughly 20 percent or 30 percent of the total that we have estimated to be required for the expansion of Jewish manufactures.

In electric power, despite the pioneering contribution of foreign private capital, there is serious question whether such funds *should* be attracted further. Certainly in the case of hydroelectric development, capital costs would be so heavy as to make the interest and profits required by private foreign funds a very severe burden. Even in the case of further thermal power development, a reduction in the present high capital costs (and profits) should be sought. This reduction would deter foreign private investment. Public funds borrowed (at home or aboard) at low interest rates seem likely to be the main road to the low electricity charges needed to facilitate general economic expansion.

In housing also the need for low interest charges is a serious barrier to extensive foreign private investment. Moreover, the enormous needs accumulated in all countries during the war make for a very high level of demand. Private funds seeking investment in housing are likely to find comparatively good demand in Britain, the United States, and other countries for some years. Some United States insurance companies have found that, by establishing their own housing developments, they can earn about 6 percent net on the invested capital. Under such market conditions, there is no drive for them to seek out uncertain investments in Palestine. The simplest Palestinian housing will probably not appear to be a very good investment to foreign institutions accustomed to high construction standards. Until prices have been deflated and the political atmosphere cleared, foreign private investors are likely to move very slowly. Even when they do move they will probably come in only on better-class housing and only on a modest share of the risk. For these reasons, we regard 10 percent of the total required outlay on housing as a high estimate of what might be furnished by foreign private capital in the next decade, and we would count on very little of that in the first few years. Even 10 percent would mean £P 20 million to £P 25 million, in round figures. Only the ablest Palestinian organization might secure some such amount.

In the field of other private construction, transport, trade and services, there are several activities which have attracted foreign private capital in the past and will presumably continue to do so in the future. Such activities include shipping, the operation of hotels, tourist services, and international trading activities. Our discussions with Palestinian businessmen suggest that, given peace and an expanding economy, it is possible that foreign capital might be drawn into investing an amount of the order of £P 5 million in these activities during the next decade.

We come, therefore, on a very tenuous and speculative basis, to a total amount of some £P 35 million to £P 40 million, which foreign private capital might be willing to invest in an expanding Palestinian economy during the next decade.

Jewish National Capital Import

Equally speculative must be any estimate of the funds that will be available to finance Palestinian development from contributions by world Jewry. In the twenty years 1919-39, the total receipts of the Jewish national institutions averaged £P 1 million. In the five years 1939-44, they averaged £P 4 million. Due to the inflation of Palestine prices and the spending of large sums in Europe for relief, rescue, and transportation, the real resources available for expenditure in Palestine increased much more modestly. Yet the nominal amounts involved are so large that they have caused the Jewish national institutions to raise their sights. For the next ten years, they now forecast contributions at an annual average of £P 7 million to £P 10 million.*

While sympathizing with the objective of urging world Jewry to assist the settlement of immigrants in Palestine, we cannot agree that there is now any firm, reasoned basis for assuming a rising trend of world Jewish contributions for this purpose. The high level of wartime incomes in the United States and other Western countries, the high level of taxes and allowable deductions for contributions, and the extreme need of European Jews have combined to cause an entirely unprecedented flow of contributions. It is doubtful whether this flow can be sustained, much less increased. Moreover, with the removal of German domination, a larger part of the total funds will be spent in Europe and a smaller part in Palestine. For these reasons, it does not seem to us wise to count on an amount of a much larger magnitude than £P 30 million in contributions to Palestinian national institutions from abroad during the next decade. On the other hand, we agree that the Jewish national institutions are justified in attempting to get very much more.

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*In these forecasts, contributions from abroad are not always clearly distinguished from receipts from Palestine. In so far as the latter are used for capital purposes, they are included in our domestic net saving.

The present sources of the funds of the Jewish national institutions afford only a very unstable and unsatisfactory basis for operations. Over 90 percent of their total receipts come from voluntary contributions by individuals or free-will grants from other institutions. The Jewish national institutions have spent a large part of their funds on economic development, but these expenditures do not yield a cash return adequate to make them self-sustaining in any substantial degree. Having no general taxing powers, the Jewish institutions are in no position to recapture and reinvest any part of the general expansion of income resulting from their expenditures.

The postwar development of Palestinian resources will require large powers of financing and control. These are inherently Government powers. They cannot be accomplished by quasi-public bodies, no matter how resourceful. In the measure in which special functions are delegated to quasi-public bodies or public corporations, those institutions need the continuing support of an aggressive and sympathetic Government fiscal and monetary policy.

Reparations

All of these potential sources of capital taken together come to substantially less than the capital that we have estimated to be required. On our lower immigration assumption, the above sources of capital total £P 240 million to £P 315 million, compared with a requirement of £P 473 million. On our higher immigration assumption, they total £P 250 million to £P 340 million, compared with a requirement of £P 673 million. In the lower case, the capital deficiency might be expressed as roughly £P 150 million to £P 250 million, while in the higher case its round amount is between £P 325 million and £P 425 million.

We do not wish to suggest that these estimated deficiencies indicate anything more than the very rough order of magnitudes probably involved. It must be emphasized particularly that deficiencies as small as these are predicated on success in two directions where success is widely doubted by competent judges: (1) securing gradual use of Palestine's accumulated sterling balances and (2) achievement of a domestic savings ratio of between 7½ percent and 15 percent of the national income. Should there be failure in either of these two directions—or in any other potential source of capital—a correspondingly higher deficit would emerge.

Were the equities of the case to be decisive, there could be no question that this capital deficiency should be met entirely out of German reparations. It was on the Jewish people that Germany inflicted its greatest wrong; the Jewish people is correspondingly first in its moral claim to reparation. The war of Germany against the Jewish people began in 1933. When this war reached full tempo, its objective was extermination, and that objective was very largely attained. Even where the objective fell somewhat short of the mark, the Jewish problem was aggravated extremely. No reparation for the dead is possible. But a contribution towards the resolution of the problem of the living may, in barest justice, be expected from the German people. In so far as Jews wish to begin their lives over again in Palestine, Germany may reasonably be required to furnish the requisite economic resources. Even a formula that provided £P 500 million ($2 billion) for Jewish Palestine would be paying an amount less than one-third of the value of Jewish wealth in Europe lost due to German action.*

Reparation to the Jewish people cannot reasonably be allocated to Palestine alone because some Jews will no doubt wish to settle elsewhere or remain in the countries where they are now living. But reparation could easily be apportioned to Jewish Palestine, over the years, in accordance with the number of European Jews who go there to live. Such a contribution towards the settlement of the European Jewish problem is to be distinguished completely from the settlement of individual claims for property damage. The settlement of individual Jewish claims will be a formidable task, extending over many years; not only whole families but even whole communities of Jews have been destroyed without a trace. But these individual settlements need have no connection with a general political reparation.

International Public Loans

Unfortunately, however, reparations seem likely to be assigned to the various claimants not in proportion to their damages or

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*The minimum estimate of Jewish wealth in Europe before Hitler is $6 billion. See Nehemiah Robinson, *Indemnification and Reparation*, N. Y., 1944.

needs but in proportion to their political and military strength. As yet the Jewish people has not even been accorded a voice in reparations consultations. The legal fiction of individual "persons of Jewish faith" has prevailed over the living fact of a group having common political, economic and social problems that are basic so far as adequate reparation is concerned. Again, as so often in recent years, platitudinous expressions of concern over injustice to Jews is accompanied by profound indifference as to what actually happens to them. The Nazis appreciated this dualism —and acted upon it.

It may very well be, therefore, that Palestine will have to borrow a large part—or even all—of the funds that she has a claim to receive as reparations. If no reparations are received, it will be very difficult for Palestine to attain the upper limit of probable immigration that we have projected while preserving even the very modest prewar standard of living of her Jewish population. She would probably have to borrow from abroad an amount of the order of £P 325 million to £P 425 million to achieve this goal.

Foreign loans of this order of magnitude would have to be derived primarily from the International Bank (to be established under the Bretton Woods agreements) and from public lending institutions of the United States. Medium term loans for agricultural and manufacturing equipment might be given under Export Import Bank guarantee. Long-term loans for irrigation, power development, ports, railroads, etc. might be secured from the International Bank. Such loans would have to be sponsored by the Government of the United Kingdom, and their service would become a basic consideration of Palestinian monetary and fiscal policy.

Again we converge upon the same conclusion as has been reached from many other angles: large-scale immigration and rapid economic development in Palestine during the next decade will require the intelligent, aggressive support of a development-minded Government.

SUMMARY

1. With the reopening of international trade, Palestine must undergo a major price level readjustment. Her wholesale prices prevailing at the beginning of 1945 must be cut more than 50 percent and her cost of living about 40 percent. In her peculiar circumstances, devaluation will be of little assistance. She needs increased imports, decreased customs and excise levies, lower profit ratios, lower basic wage rates, and a drive to increase productive efficiency. Of these, the decrease in basic wage rates will probably be the most

difficult to achieve, but it appears essential to large-scale immigration.

2. Palestine's public monetary practices need to be altered gradually to make monetary policy an effective instrument of development. Ultimately the public monetary authority should become a central bank, extending credit to Government, assuring any necessary concentration of the country's foreign exchange holdings, and acting as the final source of credit for the whole economy.

3. The private banking system would be strengthened by the elimination of interest on demand deposits, the limitation of interest on time deposists, and the raising of minimum banking capital requirements. Banks must strengthen their equity capital, in relation to their deposit liabilities, if they are to be dynamic factors in development.

4. The Palestinian revenue system today is regressive and economically unstabilizing. It should be transformed, as rapidly as public understanding and administrative resources will allow, into one based on progressive taxes on income, capital gains, and inheritance. An indispensable feature of this transformation is an income tax with much lower exemptions and higher initial rates. Exemptions should vary with the state of employment.

5. Economic growth requires a major expansion of Government development and welfare services. Expenditures for agricultural research and training need to be enlarged greatly. Government should plan, for the long run, to bring Arab health services up to the Jewish level. Above all else, an entirely new sense of urgency and scale needs to be imparted to Government work in education.

6. Palestinian economic development during the next decade will require sizable real capital investment. This investment will be required for a variety of purposes: (a) to make up deficiencies that have accumulated during the war years, (b) to raise the Arab standard of living, (c) to equip the natural increase of both the Jewish and Arab populations, and (d) to provide for the needs of new immigrants. On our lower limit of the number of immigrants who can probably be absorbed into productive economic activity, all these purposes together would call for an outlay of the order of £P 475 million. On our higher limit, they would call for about £P 675 million.

7. The capital required can be made available from a variety of sources: (a) sterling balances, (b) domestic net savings, (c) immigrants' capital, (d) foreign private investment, (e) Jewish contributions, (f) reparations, and (g) foreign public loans.

Despite energetic exploitation of all other sources, on our higher immigration limit Palestine will still need £P 325 milion to £P 425 million from reparations or public loans. The readiness of the Great Powers, whose views will be decisive, to guarantee the availability of this required capital will be a profound test of the quality of postwar reconstruction.

APPENDIX

NOTES AND ACKNOWLEDGMENTS

CHAPTER 1

None of the many people who have assisted us in the course of our investigation bears any responsibility for our analyses and conclusions. On the other hand, those who have helped us with information and given us the benefit of their judgment are so numerous as to make it very difficult to single out any few for special mention.

We owe a general acknowledgment of indebtedness to Lord Gort, High Commissioner for Palestine, and to Mr. J. V. W. Shaw, Chief Secretary of the Palestine Government. We are indebted to them for valuable discussions and for their forthrightness in making available to us all economic information at the disposal of the Palestine Government.

It was our good fortune to be in Palestine at the same time as Dr. Chaim Weizmann. He, as well as Mr. David Ben Gurion, gave us the benefit of their views and opened to us all the facilities of the Jewish Agency for Palestine.

Mr. L. Pinkerton and Mr. M. Hooper, of the American Consulate General at Jerusalem, were helpful in various ways.

Mr. George Wood, Government Statistician, and Messrs. David Horowitz and Alfred Bonne, of the economic staff of the Jewish Agency, furnished us economic information and gave us the benefit of their views on a great variety of subjects.

Messrs. Julius Simon, Mark Jaffe, Harry Wolfson, Heinz Ludwig, and Josef Nahmani were very helpful in advancing our general knowledge of the Palestinian economy.

Dr. Eli Ginzberg has given us valuable suggestions at all stages in our work.

We are grateful for many services rendered by Miss Edna Preiser of the American Economic Committee for Palestine, N. Y., and for the courtesy of the officers of the Library of Congress, Washington, D. C.

This chapter was prepared by Mr. Oscar Gass on the basis of discussions among the three authors that have extended over almost two years.

CHAPTER 2

The literature on "the Eastern question" and on Palestine's role in it, from Napoleon through World War I, is enormous. No one, however, should miss the magisterial work by H. W. V. Temperley, *England and the Near East*, London, 1936. A searching reinterpretation of Britain's role in the Eastern question is contained in R. W. Seton-Watson, *Britain in Europe*, 1789-1914, Cambridge, 1937. The general diplomatic development in the years 1870-1914 is perhaps best followed in the learned and dispassionate works of Langer and Fay: W. L. Langer, *European Alliances and Alignments, 1870-1890* and *The Diplomacy of Imperialism, 1890-1902, N. Y.*, 1931 and 1938, and S. B. Fay, *Origins of the War*, 2 vols., N. Y., 1930.

We have profited especially from the great works of Doughty and Musil on the life of the desert and from the unique account of camel raiding written by Lawrence: C. M. Doughty, *Travels in Arabia Deserta*, Cambridge, England, 1888, 2 vols.; Alois Musil, *The Northern Hegaz*, 1926, *Arabia Deserta*, 1927, *The Middle Euphrates*, 1927, *Palmyrena*, 1928, *Northern Negd*, 1928, *The Manners and Customs of the Rwala Bedouins*, 1928, New York; T. E. Lawrence, *Seven Pillars of Wisdom*, New York, 1926.

Also illuminating have been G. L. Bell, *The Desert and the Sown*, New York, 1907, and *Amurath to Amurath*, London, 1911; H. St. J. B. Philby, *The Heart of Arabia*, New York and London, 1923, 2 vols., and *Arabia of the Wahhabis*, London, 1928; Bertram Thomas, *Arabia Felix*, New York, 1932; C. S. Jarvis, *Three Deserts*, New York, 1937.

For a masterly sketch of the nomadic way of life and its possible imminent extinction, see A. J. Toynbee, *A Study of History*, vol. III, pp. 7-22, London, 1934. The most searching essay on the settlement of the bedouins that has come to our attention is A. N. Poliak, *Report on the Agricultural Settlement of the Bedouins* (unpublished), Jan. 1, 1942.

See also the notes and acknowledgments to Chapter 7 below.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 3

The literature on the pre-Israelite period alone is enough to occupy the energies of a lifetime. We have found the following most useful: *The Stone Age of Mt. Carmel*, Vol. I, 1937, Oxford, by D. A. E. Garrod and D. M. A. Bate and Vol. II, 1939, by Sir Arthur Keith and T. D. McCown; A. G. Barrois, *Manuel D'Archeologie Biblique*, Tome 1, 1939, Paris; W. F. Albright, *From the Stone Age to Christianity*, 1940, Baltimore; Nelson Glueck, *The Other Side of the Jordan*, 1940, New Haven.

The works to which our indebtedness is greatest on the subject of ancient Hebrew society are J. Pedersen, *Israel*, London, 1926, and Max Weber, *Das Antike Judentum*, Tubingen, 1923. Among general histories, we have attempted to steer our way between the extreme critical position, represented by the chapters contributed by S. A. Cook to the successive volumes of the *Cambridge Ancient History*, and that which gives greater weight to the literary tradition, exemplified by the works of R. Kittel; see especially Kittel's *Geschichte des volkes Israel*, Stuttgart, 1925-32, 3 vols. On the Canaanites, see the the essay by W. F. Albright, "The Role of the Canaanites in the History of Civilization," in *Studies in the History of Culture*, Menasha, 1942. On Samaria, see J. W. Jack, *Samaria in Ahab's Time*, N. Y., 1929. The population estimates are from S. W. Baron, *Israelitic Population Under the Kings*, Chajes Memorial Volume, 1932. (Excerpt translated from the Hebrew, in files of American Economic Committee for Palestine.)

On the general Greco-Roman period, there are now the comprehensive works of M. I. Rostovtzeff, *The Social and Economic History of the Hellenistic World*, Oxford, 1941, 3 vols., and *The Social and Economic History of the Roman Empire*, Oxford, 1926. An outline sketch is Eduard Meyer, *Blute Und Niedergang Des Hellenismus in Asien*, Berlin, 1925. An excellent summary history is constituted by the chapters contributed by E. R. Bevan, A. Momigliano, and Franz Cumont to the later volumes of the *Cambridge Ancient History*. We have also profited from the general account given in S. W. Baron, *A Social and Religious History of the Jews*, N. Y., 1937, 3 vols.

With respect to Hellenism and the Maccabees, see Eduard Meyer, *Ursprung Und Anfange Des Christentums*, Stuttgart, 1921-23, 3 vols., especially Vol. II. On Roman and Christian Palestine, besides the works cited above, see E. Schuerer, *Geschichte Des Judischen Volkes*, Leipzig, 1901-11; A. Buchler, *The Economic Conditions of Judea After the Destruction of the Second Temple*, London, 1912; M. Avi-Yonah, "Roman Map of Palestine," in *Quart. Dept. Antiq. Pal.*, 1936, pp. 189 ff, F. M. Heichelheim, "Roman Syria," in *An Economic Survey of Ancient Rome*, Vol. IV, Baltimore, 1938.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 4

The general problem of the position of the Arabs in history is examined by A. J. Toynbee in *A Study of History*, Oxford (6 vols. already published), 1934-39. A valuable general history is P. K. Hitti, *History of the Arabs*, 3d revised edition, London, 1943. Perhaps the most suggestive insight, however, is still that of Ibn Khaldun, particularly as expressed in his *Prolegomena*, reproduced as *Les Prolegomenes d'Ibn Khaldoun*, 3 vols., Paris, 1934-38.

On Islamic origins, see the essay by Julian Obermann in *The Arab Heritage*, edited by N. A. Faris, Princeton, 1944. See also C. C. Torrey, *The Jewish Foundation of Islam*, New York, 1933. The quotation from G. F. Moore is from vol. II of his *History of Religions*, Edinburgh, 1920.

On the expansion of Arab rule, see C. H. Becker, *Islamstudien*, 2 vols., Leipzig, 1924-32, and his chapters in vol. II of the *Cambridge Medieval History*. Some aspects of life in Palestine are made a little clearer by the geographers assembled in Guy LeStrange, *Palestine Under the Moslems*, London, 1890. On the Crusades, see the essay by J. L. LaMonte in the volume edited by N. A. Faris, cited above; there is also now available a fine edition of William of Tyre, *A History of Deeds Done Beyond the Sea*, 2 vols., translated by E. A. Babcock and A. C. Krey, New York, 1944.

A very important monograph on Arab society in medieval and early modern times is A. N. Poliak, *Feudalism in Egypt, Syria, Palestine and The Lebanon, 1250-1900*, London, 1939.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 5

An account of Palestine under Turkish rule is given by Jacob de Haas, *History of Palestine*, N. Y., 1934. For the condition of the country at the end of the eighteenth century, see C. F. Volney, *Voyage en Syrie et en Egypte*, 2 vols., Paris, 1787.

Valuable general descriptions of Palestine in the last century of Turkish rule are: John Carne, *Recollections of Travels in the East*, London, 1830; M. Russell, *Palestine*, London, 1850; C. R. Conder, *Palestine*, London, 1889; T. E. Lawrence, *Letters*, London, 1938 (section dealing with 1909).

Nahum Sokolow's *History of Zionism*, 2 vols., London, 1918, gives an account of Zionist beginnings. George Antonius, *The Arab Awakening*, N. Y., 1939, performs the same function for the Arab revival.

A well-balanced account of military operations in the Middle East during World War I is given in C. R. Cruttwell, *A History of the Great War*, Oxford, 1936. T. E. Lawrence has told his own story better in *Seven Pillars of Wisdom* than anybody will ever retell it. The quotation from Alois Musil is from his great book, *Arabia Deserta*, N. Y., 1927, page 399.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 6

The most adequate general study of the experience of the administration and re-interpretation of the Palestine Mandate is that of Paul L. Hanna, *British Policy in Palestine*, Washington, 1942. The account of Palestinian affairs given in the successive annual volumes of the *Survey of International Affairs*, edited by A. J. Toynbee, for the Royal Institute of International Affairs, London, is also valuable but subject to the criticisms put trenchantly by L. B. Namier in *The Nineteenth Century and After* of March 1942, reviewing the *Survey* for 1938. A very thoughtful essay, written from a broad perspective, is that of W. K. Hancock in his *Survey of British Commonwealth Relations*, London, 1937-42, particularly vol. I.

Among official documents, the Colonial Office's annual *Report on Palestine Administration*, with slightly different titles covering the years 1920-38, is indispensable. By the courtesy of the Government of Palestine, we have been enabled to examine materials prepared for this *Report* during the war years, but not published. Three documents published by the Peel Royal Commission are also of great value. These are its *Report*, its *Minutes of Evidence Heard at Public Sessions*, and the *Memoranda Prepared by the Government of Palestine*, all published in London during 1937. Together with these, one should consult the memorandum of the Jewish Agency, *The Establishment in Palestine of the Jewish National Home*, London, 1938. The most searching League of Nations comments on the administration and re-interpretation of the Mandate are to be found particularly in the contributions of the Dutch and Swiss members of the Permanent Mandates Commission, recorded in its published *Minutes*, Geneva, 1921-38.

For the establishment of the Mandate, one should consult B. E. C. Dugdale, *Arthur James Balfour*, London, 1936, 2 vols., and D. Lloyd George, *The Truth About the Peace Treaties*, London, 1938, 2 vols. The United States participation, both then and later, is covered by C. J. Friedrich, *American Policy Toward Palestine*, Washington, 1944.

One of the valuable books on the early years is P. P. Graves, *Palestine*, London, 1923. Written from a very wide background of personal culture and knowledge of the Middle East is Ronald Storr's brilliant book of memoirs, *Orientations*, London, 1937. The essays edited by E. Sereni and R. E. Ashery, *Jews and Arabs in Palestine*, New York, 1936, are informative though saturated with a superficial Marxism. Humphrey Bowman's *Middle East Window*, London, 1942, has no new insights but is valuable as a record of the reactions of a representative British senior officer under the Mandatory Government.

We are grateful to the large number of persons who were willing, in the winter of 1944-45, to give us their personal impressions of the earlier years of Mandatory administration.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 7

We are not acquainted with any satisfactory general treatise on the process of social, economic and political change now going on in the Arab countries of the Middle East. Most of the literature suffers profoundly from only superficial acquaintance with the Arab economies, external knowledge of their social structures, and schematic simplification of their political life.

A general tract, from the point of view of Arab nationalism, is H. I. Katibah, *The New Spirit in Arab Lands*, N. Y., 1940. Brief introductory essays are in P. W. Ireland (ed.), *The Near East*, Chicago, 1942. A brief sketch of the position of the Arab world at the end of the 1930's is to be found in the latter chapters of Bertram Thomas's short history, *The Arabs*, London, 1937. An outline of economic conditions is given by A. Bonne, *The Economic Development of the Middle East*, Jerusalem, 1943. A convenient compendium is the *Statistical Handbook of Middle Eastern Countries* published by the Jewish Agency for Palestine, Jerusalem, 1944.

W. W. White, *The Process of Change in the Ottoman Empire*, Chicago, 1937, gives an account of the legal and constitutional changes. Hans Kohn, *Nationalism and Imperialism in the Hither East*, London, 1932, is perhaps the most informative of several books by the same author on these subjects. R. Levy, *Sociology of Islam*, London, 1931-33, 2 vols., suffers—from our point of view—from a relatively brief treatment of recent developments. A thoughtful volume, sympathetic with Arab nationalism, is W. E. Hocking, *The Spirit of World Politics, with Special Studies of the Near East*, N. Y., 1932. A thoughtful essay, from the pen of a great master of Islamic studies, is C. H. Becker's *Educational Problems in the Far and Near East*, London, 1933.

On Egypt we have been aided particularly by H. H. Ayrout, *Moeurs et Coutumes des Fellahs*, Paris, 1938, and W. W. Cleland, *The Population Problem in Egypt*, Lancaster, Pa., 1936. An able account of Egyptian politics, from a point of view very disrespectful of Egyptian political capacity and morality, is C. S. Jarvis, *Desert and Delta*, London, 1938. A valuable book is, P. W. Ireland, *Iraq, a Study in Political Development*, London, 1937. A valuable essay, describing the Axis machine set up by the Grand Mufti of Jerusalem in collaboration with the Government of Iraq, is C. L. Sulzberger's paper on "German Preparations in the Middle East," in *Foreign Affairs*, July 1942. A very searching paper is *Problems of Arab Unity*, by Eliahu Epstein (unpublished, January 1945). We have been privileged also to read an unpublished fundamental historical analysis of *The Lebanon* by Mr. Epstein, and to discuss the trend of the Arab world with him.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 8

The literature on Jewish attitudes towards Palestine is voluminous, yet it does not constitute a complete record. Indeed, the two most numerous groups of Jews are hardly represented at all. Soviet Jewry, to the extent to which it does not wholly agree with Soviet policy, is silent through political necessity. Assimilationist Jewry in other countries is largely silent through indifference.

The most eminent student of Jewish Sociology in the past generation, Arthur Ruppin, has analyzed the main trends in world Judaism in a series of books, of which the last is *The Jewish Fate and the Future*, N. Y., 1940. A valunable historical account is that of Ismar Elbogen. *A Century of Jewish Life*, Philadelphia, 1944. A profound essay, very suggestive with respect to the basic issues, is M. R. Cohen's "Philosophies of Jewish History," in *Jewish Social Studies*, January 1939.

A characteristic revelation of the disinterest of American Jewish intellectuals in Zionism, as relevant to their *personal* future, is given by the testimony of 11 American writers of Jewish origin, all under 40 years of age, in "Under Forty: A Symposium," in the *Contemporary Jewish Record* of February 1944; not one mentions Zionism as remotely relevant to his own problems. A characteristic non-Zionist document, from Jews who are actively interested in Jewish questions and sympathetic to Jewish settlement in Palestine, is the statement of the American Jewish Committee, issued on January 31, 1943. Further examples of non-Zionist positions, among those who espouse Judaism as a religion, are *Why I Oppose Zionism*, by Rabbi Elmer Berger, San Francisco, 1943, and *Where Do You Stand?* by Rabbi I. F. Reichert, San Francisco, 1943. Some light is thrown on the views of Jews in the U.S.S.R. in two articles by

Jacob Lestchinsky, in the *Contemporary Jewish Record* for September-December 1940.

The classic Zionist position is put very cogently in a collection of statements by the late Supreme Court Justice L. D. Brandeis, *Brandeis on Zionism, ism,* Washington, 1942. Two equally classic papers are those by Dr. Chaim Weizmann, *The Jewish People and Palestine*, Jerusalem, 1936, and "Palestine's Role in the Solution of the Jewish Problem," in *Foreign Affairs* of October 1941. Abraham Bick (ed.), *Exponents and Philosophy of Religious Zionism*, N. Y., 1942, gives a brief coverage. B. Borochov, *Nationalism and the Class Struggle*, N. Y., 1937, is representative of Labor Zionism. An extremely searching statement of the case for Zionism, as seen by a non-Jew, is Reinhold Niebuhr's *Jews After the War*, N. Y., 1942.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 9

Valuable analyses of the character of the economic achievement of the Netherlands, Belgium and Switzerland are presented in several volumes of the *Geographie Universelle*, edited by Pierre Vidal de la Blache and Lucien Gaullois, Paris, 1927-39. These analyses stress both the importance of the human, creative factor and the dependence of the economic development of these countries on close economic relationships with correspondingly progressive neighboring countries. See especially the volume by Albert Demangeon, *Belgique, Pays-Bas, Luxembourg*, and by Emmanuel de Martonne, *Europe Centrale*, 2 vols., especially vol. II.

On Uruguay, see S. G. Hanson, *Utopia in Uruguay*, N. Y., 1938. On New Zealand, see W. B. Sutch, *Recent Economic Chanzes in New Zealand*, Auckland, 1936, and—for a more detailed description of an agricultural economy greatly different from that of Palestine—H. Belshaw and others, *Agricultural Organization in New Zealand*, Melbourne, 1936.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 10

Perhaps the most basic sources for this chapter are several maps. The most important is that of the survey of Palestine, on a scale of 1:100,000, with a contour interval of 25 meters, in 16 sheets. There are also several good summaries of this map, on a scale 1:250,000 and less. An important *Geological Map of Palestine*, by G. S. Blake, is also issued by the Survey of Palestine. The basic *Rainfall Map* is that of Dr. D. Ashbel, issued by the Hebrew University in cooperation with the Jewish Agency; see also D. Ashbel, *Rainfall Tables for Palestine and Adjacent Countries*, Jerusalem, 1938.

Suggestive essays on the general Mediterranean setting of Palestine are contained in *Readings in the Geography of the Mediterranean Region*, American Geographical Society, N. Y., 1943. For general treatments of Palestinian geography, see F. M. Abel, *Geographie de la Palestine*, 2 vols., Paris, 1933-38; G. A. Smith, *The Historical Geography of the Holy Land*, N. Y., 1931; 25th rev. ed., R. Koeppel, *Palastina*, Tubingen, 1930, and D. H. Kallner and E. Rosenau, "The Geographical Regions of Palestine," in *The Geographical Review*, N. Y., 1939, vol. XXIX. Valuable geographical information is contained also in Joseph Weitz, *Palestine's Potentialities*, Jerusalem, 1944 (in Hebrew; English edition forthcoming); this is based on several volumes of a comprehensive, unpublished study by the Jewish National Fund. There is no guide book that is both up-to-date and thorough; the best available is Zvi Vilnay, *Steimatzky's Palestine Guide*, Jerusalem, 1942.

A summary of the process of boundary determination is given in P. L. Hanna's excellent, *British Policy in Palestine*, Washington, 1942, particularly chapters III and IV. Evidence of elaborate early plans to use the Litani waters for Palestinian irrigation is contained in Pinchas Rutenberg, *The Water Resources of Palestine*, 1920 (unpublished).

General problems of geology, structure, and related mineral resources are treated in the following: M. Blanckenhorn, *Geologie Palestinas Nach Heutiger Auffassung, Leipzig*, 1931; G. S. Blake, *Geology and Water Resources of Palestine*, Jerusalem, 1938, and *The Mineral Resources of Palestine and Transjordan*, Jerusalem, 1930; J. Novomeysky; "The World's Potash Industry and the Dead Sea," in Palnews Economic Annual of Palestine, Tel Aviv, 1936; Ernest Bergmann, *The Dead Sea and Its Surroundings* (unpublished); F. J. Fohs, in *American Association of Petroleum Geology*, Vol. XI, No. 2, 1927.

Climatic data are published in *Palestine Blue Book* (annual before the war) and the *Statistical Abstract of Palestine* (annual), both issued by the Government of Palestine, Jerusalem. Valuable general information, particularly rich for the United States, is provided by the U. S. Department of Agriculture's *Climate and Man*, Washington, 1941.

Mr. S. W. Djanni, of the Government Office of Statistics, kindly provided us with recent statistics on forestry and fishing in advance of their publication. The forest problems of Palestine are described in brief outline by G. N. Sale, Palestine Government Conservator of Forests, in "Soil Erosion in Palestine," in *Proceedings of the Conference on Middle East Agricultural Development*, Cairo, 1944. Another forestry officer of the Government of Palestine, Mr. Asaph Gour, arrives at somewhat higher estimates of total afforestation needs in the *Journal of the Association of Engineers and Architects in Palestine*, July-August 1944 (in Hebrew).

On soils, see A. T. Strahorn, "Soil Reconnaissance of Palestine," in *Report of the Experts*, submitted to the Joint Palestine Survey Comm., N. Y., 1928; A. Reifenberg, *The Soils of Palestine*, London, 1938; and especially the recent paper by Dr. S. Ravikovich, "Composition and Properties of Palestine Soils," in the *Journal of the Association of Engineers and Architects in Palestine*, July-August 1944 (in Hebrew).

On the distribution of population, we have been greatly aided by *Village Statistics*, 1943, an unpublished volume prepared by the Government of Palestine and made available to us through the courtesy of Mr. M. C. Bennett, Director of Land Settlement, Jerusalem. On Jewish population distribution, we have used David Gurevich et al., *Jewish Population of Palestine*, Jerusalem, 1944 (Hebrew text, with English summaries and some English tables).

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 11

The basic official sources for this chapter are the *Census of Palestine*, 1931, the various issues of the *Statistical Abstract of Palestine* and the *General Monthly Bulletin of Current Statistics*, all published by the Government of Palestine, Jerusalem. On immigration there is also the annual *Statistics of Migration and Naturalization*, and on education the *Annual Report* of the Department of Education. The latest general occupational data are from G. E. Wood, *Survey of National Income of Palestine*, Jerusalem, 1943.

Much of the valuable population data assembled by the Jewish Agency has now been published in *Palestine: Jewish Immigration, Population and Natural Movement*, by David Gurevich, A. Gertz and Roberto Bachi, Jerusalem, 1944. The text of this book is in Hebrew but a summary and many tables are in English. Current Jewish Agency information on these subjects is published in the *Statistical Bulletin* (Hebrew) and, in abbreviated form, in its *Bulletin of the Economic Research Institute* (English). A valuable monograph which has grown out of these studies is *The Jewish Population of Jerusalem*, published in 1940 by the Jewish Agency. A general description of the Jewish population is given by Arthur Ruppin, *The Jewish Fate and the Future*, London, 1940.

Two informative papers on health questions are: L. Halpern, "Neurology and Psychiatry in Palestine," in *The American Journal of Psychiatry*, May 1944, and Roberto Bachi, "The Decline of Child Mortality in Palestine," in *Acta Medica Orientalia*, January 1945.

We wish to acknowledge our indebtedness, with despect to the subject matter of this chapter, particularly to Professor Roberto Bachi of the Hadassah Medical Organization in Jerusalem. Among other services, he kindly made available texts of several unpublished studies bearing on problems of health and population growth.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 12

The basic data of this chapter have been adapted from two monographic studies of national income in Palestine. The earlier of the two studies was prepared by Ludwig Gruenbaum. Relating to the year 1936, it was published by the Economic Research Institute of the Jewish Agency in 1941, under the title *National Income and Outlay in Palestine*. The other estimates were prepared by G. E. Wood, Government Statistician; they relate to the years 1939, 1942 and and 1943. A detailed account of the estimates for the former two years were published in a confidential bulletin entitled *Survey of National Income in Palestine*. An abbreviated account of the estimates for all three years was published in the *General Monthly Bulletin of Current Statistics*, August 1944.

Discussions with both authors were helpful in clarifying problems of estimation and deflation.

The following section describes the adaptations of the above estimates which seemed to be necessary for our purpose.

Adjustment of Basic 1936 Estimate

The only detailed estimate of the national income of Palestine with a breakdown by national groups is that of Ludwig Gruenbaum prepared for the Economic Research Institute of the Jewish Agency for Palestine and relating to the year 1936. The title of this study is *National Income and Outlay in Palestine, 1936*, and it was published at Jerusalem in 1941.

The author prepared the estimate in terms of "value added" (designated nominal income) by major industry groups and in terms of "final products" (designated real income). The latter are broken down into consumer's outlay on goods and services and into gross and net capital formation. The inclusion of an estimate of the international balance of payments completes a well-rounded picture of the national economy.

There are admitted defects and deficiencies of data, such as the complete lack of data on inventories and on changes in Palestinian holdings of foreign securities. To judge by published statistical data, however, the estimate probably would qualify, according to Colin Clark, as a Class II estimate; namely, an estimate "based on accurate taxation or production Census statistics but with some defects or deficiencies."*

Aside from the deficiencies of the underlying data, one may take exception to certain of the author's decisions on matters of concept. For our purposes, at least, some adjustments are called for which affect more the distribution of national income by industrial origin than the national income aggregate.

The latter is defined as the sum of the returns to the factors of production owned by those resident in Palestine. This is equivalent to the sum of the distributive shares of "value added" in each industry adjusted for the net international flow of dividends and interest. Gruenbaum's estimate of "value added' in each industry group as revised by him in our correspondence is entered in column I of Table A1 (page 000). It is not specifically stated that "value added" is taken at factor cost but this would appear to be the intention since custom duties are deducted in arriving at "value added." In keeping with the concept of "value added" at factor cost, it would be necessary to deduct also manufacturers' excise taxes on salt, matches, tobacco and alcoholic beverages amounting to £P 330,000 in 1936. This is our first adjustment and the corresponding deduction is made in column 2 of Table A1.

The second adjustment concerns the treatment of banking services. Gruenbaum measures bank services "as a margin of interest between revenues from remunerative assets and amounts payable on deposits. Banking operations are entered as real income not as (non-specific) business costs."* If deposits constitute the entirety of banks' borrowed resources, we agree that this is a correct measure of value added in banking. But to consider the services of commercial and investment banks as composed predominantly of final products rather than of intermediate products appears to be an error. It would involve much less distortion to charge back the cost of the banking service (i. e., the "value added" in banking) to the industries using the banking services and thereby avoid duplication. Under the conditions operative in Palestinian banks, however, Gruenbaum's margin of £P 860,000 involves some duplication since as he states in another connection, "more than half of capital investment by foreigners in Palestine are securities issued by, or loans to, banks and similar intitutions."** The returns on this borrowed capital must be excluded from "value added" in banking just as interest to depositors is excluded. The excluded amount is estimated at £P 25,000 by Gruenbaum in an estimate submitted to us. The duplicated amount is entered as a deduction in column 4. "Value added" in banking now becomes £P 860,000 minus 25,000, or 835,000. The industrial allocation of this banking cost shown in column 3 is based on the industrial distribution of loans and discounts of Palestinian banks in 1936 as reported in the *Statistical Abstract of Palestine*, 1937-38.

The remaining deductions in column 5 concern income from abroad. For our purpose, which aims to show the industrial origin of national income, this category is not a useful one. Ordinarily one would not make an estimate of "value added" in the tourist industry since the value added derived from

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*Clark, Colin, *Conditions of Economic Progress*, Macmillan Co., London, 1940, p. 35.

*Gruenbaum, Ludwig, *op. cit.*, p. 86.

***Op. cit.*, p. 98.

TABLE A1: NATIONAL INCOME OF PALESTINE PREPARED BY LUDWIG GRUENBAUM WITH SPECIFIED ADJUSTMENTS

(*Thousand £P*)

		Deductions					*Additions*			
Industry or source	*Gruenbaum's estimate after his own revisions*	*Mfg. excise tax*	*Cost of banking service*	*Duplication of value added in banking*	*Items to be reallocated*	*Total deductions*	*Reallocated items*	*Net profits from railroads and communications*	*Total additions*	*Final estimates*
Agriculture	5,485		250			250	315		315	5,550
Mfg., handicrafts, mining and elec. power	5,997	330	123			453	345		345	5,889
Contract construction	1,902		31			31				1,871
Commerce and transp. excl. railroad	8,181		220			220				7,961
Banks and insurance	1,140		46	25		71	630		630	1,699
Real estate	3,490		46			46				3,444
Health, educational and other local services	2,909		119			119	654		654	3,444
Government incl. railroad and communications	3,748							243	243	3,991
Income from abroad:										
Tourist trade in Palestine	404				404	404				
Personal services rendered to foreign institutions	250				250	250				
Capital proceeds received from abroad on private account	630				630	630				
Re-exports and exports to Transjordan	660				660	660				
TOTAL	34,796	330	835	25	1,944	3,134	1,944	243	2,187	33,849

serving tourists and nontourists in restaurants, hotels, on trains, etc., would not be available separately. Gruenbaum believes, because of the statistical expedients he was obliged to use, that his estimate of value added in the service trades is understated and thinks therefore that the tourist trade, based on expenditure figures reported by the tourists to the Government, may be justifiably added to compensate for the understatement. We accept this judgment but allocate the sum to the services.

The second item in this classification, personal services rendered to foreign institutions, such as the Iraq Petroleum Company and consulates, is rightly included in the national income total since it represents compensation for personal services of persons resident in Palestine, and presumably these payrolls would not be covered in any other industry. It is awkward, however, to include this item under "income from abroad." It has been reallocated to the service trades.

Since capital proceeds paid abroad by each industry were subtracted in each case from gross value in estimating value added, it is necessary in order to reach the national income total to include the capital proceeds received from abroad on private account. This income is assumed to originate in finance.

The inclusion of re-exports and exports to Transjordan can be justified only on the grounds of statistical expediency. For 1936 the Government has not released the values of the individual commodities comprising these exports. Accordingly they could not be elimiated from the import figures used to arrive at value added. The latter therefore is understated by virtue of this fact. To compensate for the understatement the proceeds from re-exports and exports to Transjordan are included. This would affect the national income attributable to agriculture and manufactures since it was a commodity export. The sum involved, £P 660,000, was divided between agriculture and manufacture in accordance with the relative weight of national income in each prior to adjustment.

One other addition is necessary in our opinion. This arises from the fact that the return to capital used in the railroad and communications industries has been omitted inasmuch as these industries are government-operated and "value added" in government is measured by the compensation to its employees and interest payments. The omission may be corrected by considering the return to capital in these two industries as equal to the difference between operating revenue and operating expense. This difference entered in column 8 amounts to £P 243,000 with depreciation in the railroad industry equal to cost of maintenance and renewals. All figures are taken from the *Statistical Abstract of Palestine*, 1937-38.

These adaptations of Gruenbaum's estimate result in a national income total of £P 33,849,000, nearly 3 percent lower than Gruenbaum's.

Notes on Table 1

Line 1: See Table A1.

Line 2: Gruenbaum's estimate as adapted in Table A1.

Line 3: The value added by the Palestine Electric Company, largely Jewish owned, and canvassed in the Census of Jewish Manufacture, Transportation and Commerce covering activities in 1936, is allocated to the Jewish sector. The Jerusalem Electric and Public Service Corporation, not canvassed in the above census and controlled by English interests, is assigned to the non-Jewish sector. Payrolls in the Palestine Electric Company reported by Gruenbaum in correspondence. The payroll of the Palestine Electric Company is raised to cover the entire industry by the ratio of total k.w.h. sales to the k.w.h. sales of Palestine Electric Company. Sales in k.w.h. are reported in the *General Monthly Bulletin of Current Statistics of Palestine*, March 1937, p. 41.

The returns to capital are profits after depreciation but before other types of reserves for calendar year 1936 for the Palestine Electric Company and the fiscal year ending March 30, 1937, for the Jerusalem Electric and Public Service Corporation. These figures are included in the *Report by His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland to the Council of the League of Nations and the Administration of Palestine and Trans-Jordan for the year 1937*, Colonial No. 146, pp. 398, 402.

Line 4: Gruenbaum's estimate as adapted in Table A1 minus line 3.

Lines 5-16: Jewish sector—Wages and salaries including salaries withdrawn by proprietors are as reported in the Jewish Census. The sum of the payrolls when subtracted from the "value added" by Jewish manufacturers, as adapted from Gruenbaum's estimate, yields the value of the capital return for all manufactures. This total is distributed by minor industries according to the relative distribution of "value added" minus payrolls as reported in the Jewish Census. The sum of payrolls and capital returns equals "value added" as defined for national income purposes.

Non-Jewish sector—The distribution of "value added" by minor industries is based on the relative distribution of value added by industries as reported in the Government's 1939 Census of Non-Jewish Manufactures.

The addition of the "value added" in the Jewish sector and non-Jewish sector equals "value added" for Palestine.

Line 17: Gruenbaum's estimate as adapted in Table A1.

Line 18: Value added in railroad transport for fiscal year 1936-37 is the sum of payrolls and operating profit after maintenance and renewals. All figures taken from the *Statistical Abstract of Palestine*, 1937-38, Tables 85, 87 and 89.

Line 19: Gruenbaum's estimate as adapted in Table A1.

Line 20: The sum of salaries and wages including withdrawals of proprietors and operating profit. The latter is equal to gross receipts minus one-third of rent and minus payrolls. According to Gruenbaum's computations one-third of gross rent is the cost of real estate services and maintenance and hence cannot be considered a capital return. All figures from *Census of Jewish Transportation*, Table 27.

Line 21: Total for Palestine is sum of payrolls and net operating income as reported in the *Blue Book*, 1936. Payrolls divided between Jews and non-Jews according to actual payments; capital returns according to population. Communications include the post offices.

Line 22: Gruenbaum's estimate as adapted in Table A1.

Line 23: Gruenbaum's estimate as adapted in Table A1.

Line 24: Gruenbaum's original estimate.

Line 25: Gruenbaum's original estimate.

Line 26: Gruenbaum's estimate as adapted in Table A1.

Line 27: Gruenbaum's original estimate.

Line 28: Equal to payrolls reported in *Sicumim*, Statistical Survey of the General Federation of Jewish Labour in Palestine, Vol. 10, 1938, p. 11.

Line 29: Line 27 minus line 28.

Notes on Table 2

On the outlay side, the suggested changes are only two in number. One involves the exclusion of banking services as a consumers' expenditure since on the income account it was considered as a business cost. The other concerns a slight difference in the amount of indirect taxes to be deducted to reduce consumers' expenditures to factor prices. Although Gruenbaum's adjustments are not entirely clear, his implicit deduction for indirect taxes equals £P 2,543,000.* In our judgment indirect taxes on consumers' expenditures amounted to £P 2,537,000 inasmuch as Gruenbaum estimates indirect taxes collected in 1936-37 at £P 2,635,000, of which £P 98,000 were custom duties collected on imported capital goods.**

As a result of all these modifications in the estimates of national income and outlay, consumers' expenditures exceed national income by £P 813,000. In Gruenbaum's reckoning this difference is £P 20,000 which he designates as negative saving. In our estimate it seems more appropriate to regard the difference as a discrepancy. How much of the discrepancy may represent negative savings and how much errors of estimate cannot be stated.

Notes on Table 4

Only one adjustment to Wood's estimate of national income has been made. This concerns the net outward flow of dividends and interest in 1939 amounting to £P 200,000. Wood disregards this item because "when there is a debit then this is a legal obligation which has to be paid either out of income received from other sources, or out of capital. Debit items of this nature will thus appear in the account of outlay or of capital movements." (*Op. cit.*, p. 31).

This is to confuse the method of payment with the character of the payment. A credit balance, moreover, is added by Wood to the national income total. In our view there is no difference in concept between a net credit and net debit; it is solely a difference in the place of residence of the recipient. Accordingly we add the net credit balance as Wood does and deduct the net debit balance, which Wood neglected to do. For this reason our total for 1939 is £P 200,000 less than Wood's estimate.

Notes on Table 7

Line 1: Imports and exports are deflated separately and the difference entered here. The price index used for imports taken from *General Monthly Bulletin of Current Statistics, Feb. 1945*, p. 68. An index of similar construction for exports based on official statistics computed by us.

Line 2: The net output originating in agriculture was deflated by an index of prices received by farmers as presented in an unpublished manuscript of Ludwig Samuel of the research office of the Jewish Agency. Net output originating in manufactures and mining (construction was disregarded since there was virtually no private building either in 1939 or 1942) was deflated by the price index of clothing, footwear, furniture and kitchen utensils as reported by the Statistical Department of the Jewish Agency as components in its Standard of Life of a Jewish Worker's Family. These are the only indexes extending backward to 1939. Since price fluctuations in the Arab and Jewish markets tend to move in a sympathetic manner, our procedure should not introduce a gross distortion.

Line 3: Not suitable indexes. Relied on the judgment of the Government Statistician which was given orally.

**Op. cit.*, Table 17, p. 41.

**See *ibid.*, Table 32, pp. 61 and 91.

Line 4: From the figure in current prices was deducted the value of cost-of-living allowance granted to government workers.

Line 6: The difference between outlay and income, aside from errors of estimate, represents the volume of savings, most of which took the form of sterling balances held in London. It seemed reasonable to ask what volume of goods valued at 1939 prices could have been purchased by these balances in 1942. The answer is given by deflating the savings figures by our index of import prices.

This chapter has been prepared by Mr. Daniel Creamer.

CHAPTER 13

The 1936 estimate of the Jewish National Fund is found in the unpublished report of the Water Research Bureau, Jewish Agency for Palestine and Jewish National Fund, *Water Survey of Palestine,* 1942. Estimates of water available from the Yarmuk and the Litani for use in Palestine were taken from James B. Hays, *Proposed Plan for Irrigation and Hydro Electric Development in Palestine,* January 7, 1945 (unpublished). Another rainfall estimate for 1936 is found in Julius F. Fohs, *Memorandum to the Palestine Royal Commission on the Water Resources of Palestine.*

For Government postwar plans for irrigation see *Report of the Committee on Development and Welfare Services,* Government Printing Press, Jerusalem, 1940. Account of water development plans of the Jewish Agency taken from an unpublished manuscript of Armin Weiner. Granovsky's figure on land under irrigation in 1936 taken from Abraham Granovsky, "Water Policy for Palestine" in *Palestine and Middle East,* July 1937. For other data on irrigation see also W. Stein, "Palestine's Water Problem" in *Palnews Economic Annual,* 1936.

The material on costs of irrigation was taken from an unpublished study of the Palestine Water Company, "Analysis of the Cost of Water." Data on waste of water in central Sharon supplied by I. Vilentchuck of the Palestine Water Company.

We are also indebted to the members of the staff of the Water Research Bureau and the Irrigation Office of the Colonization Department of the Jewish Agency, the Palestine Land Development Company, and the Palestine and Mekoroth Water Companies.

General data on fuel taken from H. Rothschild, "Power and Fuel Economics in Palestine" in *Palnews Economic Annual,* 1939, and "Oil Prices and Oil Policy in Palestine" in *Bulletin* of the Economic Research Department of the Jewish Agency, first issue 1940. The share of fuel and power costs in transport and industry were available in David Gurevich, *Jewish Manufacturing, Transportation and Commerce,* Jewish Agency, Jerusalem, 1939. Quote on government stipulation to the oil company in Government of Palestine, *Ordinances, Regulations, Rules, Orders, and Notices,* Annual for 1939, Vol. I, Ordinances, pp. 53-57. Statements on fuel economy from unpublished memorandum of the Association of Engineers and Architects in Palestine, *Fuel and Energy,* June 27, 1944.

For background data on power see Basim Faris, *Electric Power in Syria and Palestine,* 1936. Estimate of the maximum output of the PEC made by James B. Hays in unpublished memorandum prepared for the Commission on Palestine Survey, July 21, 1944. Data on increase of power costs during the war from "PEC to Undertake New Functions," in *Haaretz,* January 3, 1944. The possibilities of substituting diesel power and windpower taken from the unpublished memoranda of the Association of Engineers and Architects, *The Price of Energy*, April 30, 1944, and *Wind Power in Palestine.*

This chapter was prepared by Mr. Robert R. Nathan with the assistance of Miss Florence Schoenberg.

CHAPTER 14

The general statistical publication of the Government of Palestine and the Jewish Agency contain current information on agriculture. See also, Government of Palestine, *Annual Report of the Department of Agriculture and Fisheries*, Jerusalem, and Jewish Agency, *Census of Jewish Agriculture*, 1941-42, Jerusalem (in course of publication; advance summary tables made available to us through courtesy of Mr. David Gurevich).

A brief account of Palistinian land law is given by M. J. Doukhan in *The Economic Organization of Palestine*, ed. by S. B. Himadeh, Beirut, 1938. A fuller account is in Goadby and Doukhan, "*The Land Law of Palestine*, Tel Aviv (1945 edition forthcoming).

We have profited greatly, so far as the progress of land settlement is concerned, from an opportunity to examine documents and maps in the files of the Department of Land Settlement, made available by the courtesy of its Director, Mr. M. C. Bennett. His unpublished recent *Annual Reports* and the records of settlement operations in 1944 were particularly helpful. The unpublished *Village Statistcs, 1943* was also of service. An unpublished 1936 study of land tenure, also made available through Mr. Bennett's courtesy, afforded some useful suggestions despite the imperfections of its statistical methods. Mr. S. Lifschitz, of the Jewish National Fund, kindly made available several maps showing the parcellation of Arab villages.

We are deeply indebted to Mr. S. W. Djanni, of the Government Office of Statistics, for several discussions of Arab land tenure and land use. Mr. Djanni's sample study of five Arab cereal villages should be a milestone in the knowledge of Palestinian rural economics.

Jewish land ownership and use are described in David Gurevich and A. Gerz, *Jewish Agricultural Settlement in Palestine*, Jerusalem, 1938. See also Abraham Granovsky, *The Land Issue in Palestine*, Jerusalem, 1936, *Land Policy in Palestine*, N. Y., 1940, and *The Political Struggle on the Land Question* (mimeographed), 1943. On land ownership by Jews, we are indebted for several unpublished tables furnished by the Jewish National Fund. On the operation of the Land Transfer Regulations, we received valuable information from Mr. Stubbs, Director of Land Registration. We have not thought it necessary to go into the Brtish political agitation surrounding the establishment of the Protection of Cultivators Ordinance—and its quiet abandonment during the war. The withdrawal of the ordinance is revealing both of the emptiness of the political agitation concerning "landless Arabs" and the consideration exercised particularly by the Jewish National Fund with respect to Arab tenants on land that the Fund purchases.

On the early development of Jewish agriculture, the works of Arthur Ruppin are most authoritative. A personalized account of one settlement is Joseph Baratz, *The Story of Degania*, N. Y., 1936. A good account of collective life, from the social point of view, is H. T. Infield, *Cooperative Living in Palestine*, N. Y., 1944.

On the issue of the extent of "cultivable" land in Palestine, there is valuable information in the *Report, Minutes and Memoranda* of the Royal Commission of 1936-37. See also the *Report* of the Palestine Partition Commission, London, 1938. An able critique of the official point of view represented by these documents—a critique valid in what it denies, if not in what it affirms—is presented in Joseph Weitz, *Misjudging the Land*, Jerusalem, 1939. We are grateful to Messrs. Joseph Weitz and S. Lifschitz for the time that they generously spent in giving us a detailed exposition of the methods and conclusions of their still unpublished recent studies of the extend of cultivable land and of the requirements for soil amelioration.

Some information on Fellah farming is contained in W. J. Johnson and R. E. H. Crosbie, *Report . . . on the Economic Condition of Agriculturists . . .*, Jerusalem, 1930, and I. E. Volcani, *The Fellah Farm*, Rehovot, 1930.

We are especially indebted to Dr. J. Loewe and Dr. L. Oppenheimer for making available to us the results of their careful studies of capital requirements, land use, prices and incomes in Jewish farming. Dr. Loewe in addition kindly burdened himself by undertaking to answer scores of questions on Palestinian agricultural economics. The range of his information and the care with which it had been sifted and analyzed proved very helpful. We were also assisted, particularly in understanding the accounts of the Jewish collective farms, by the series of consolidated Balance Sheets and Income and Expenditure Statements assembled by Mr. I. Rabinowitz in his unpublished memorandum of January 15, 1945.

Perhaps the most valuable single document on Palestinian citriculture is the thoughtful paper by M. H. Sachs entitled, *Adjustments in Palestinian Horticulture . . .*, Jerusalem, 1942. We remember, with pleasure as well as profit, the day spent discussing these and related matters with Mr. Sachs on his farm at Gan Chaim. Also of great value was the unpublished study on the *Citrus Industry*, by Dr. L. Pinner and B. Schur, kindly made available by Dr. Pinner. See also B. Schur, *The Part Played by Citriculture in . . . Palestine*, Tel Aviv, 1940, and N. W. Hazen, *The Citrus Industry of Palestine*, U. S. Department of Agriculture, D. C., 1938. On marketing problems, especially notable are two papers prepared by S. Tolkowsky, *Problems and Needs of the Citrus Industry of Palestine*, Tel Aviv, 1936 and *The Future of the Citrus Industry*, Jerusalem, 1942.

On general problems of farm incomes and marketing, we have been dependent principally on the work of Mr. G. E. Wood, Government Statistician, and Dr. Ludwig Samuel, of the staff of the Jewish Agency. Mr. Wood kindly made available an unpublished memorandum on agricultural income in 1943. Dr. Samuel generously placed at our disposal his unparalleled knowledge of marketing problems in Palestinian agriculture. He kindly allowed us to have copies of several of his unpublished studies and undertook to assemble special information at our request. Our indebtedness to Dr. Samuel is greatest among all the many persons—most of whom we have had to leave unmentioned—who graciously (though perhaps vainly) attempted to help us to a clear understanding of the problems of agriculture in Palestine.

The W. C. Lowdermilk quotation is from his *Palestine, Land of Promise*, N. Y., 1944.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 15

The general statistical sources published by the Government and by the Jewish Agency are equally revelant to this chapter. So also are the annual reports of the Mandatory and of the Jewish Agency to the League of Nations. See also the works cited above by Himadeh and by Horowitz and Hinden.

Of general interest is the *Palestine and Middle East Economic Magazine.*

On the general experience in industrialization of backward countries, see H. Frankel, "The Industrialization of Agricultural Countries," in the *Economic Journal*, 1943.

For statistics on the prewar development of Jewish-owned manufactures, chief reliance was placed on *Jewish Manufacture, Transportation and Commerce, Report and the General Abstracts of the Censuses Taken in 1937* published by the Department of Trade and Industry of the Jewish Agency for Palestine, Jerusalem, 1939. Gerhard Muenzner, *Jewish Labor Economy* in Palestine, Jerusalem, 1943, contains useful information on the development of manufacturers under Histadruth control. This was supplemented by special tabulations prepared by the organizations concerned. For the financial problems of this development the best discussion is contained in Heinrich Cohn, *Report on the Industrial Credit Investigation*, May 1936-January 1937 (unpublished). The *Palnews Economic Annual*, 1939, appendix contains a convenient summary of tariffs.

Data on Arab manufactures are contained in the two census surveys taken by the Government Office of Statistics as of 1939 and 1942, both unpublished. The earlier one has been summarized in *Report of the Wages Committee Under the Chairmanship of His Honour, Mr. Justice F. Gordon-Smith, Jerusalem*, 1943. See also David Horowitz, "Arab Economy in Wartime," in *The Pioneer* (Hechalutz B'Anglia), December 1943-January 1944.

Wartime developments in Jewish-owned manufactures reported statistically in the Seventh Census of Jewish Manufactures, 1943, published in the *Statistical Bulletin*, March 1945, issued by the Department of Statistics of the Jewish Agency. The preliminary tabulations of the Government's Census of Industry in 1942 was also helpful as was its special tabulation on basic wages in 1944. Other informative reports include *Reports of the Palestine War Supply Board, Jerusalem* (secret); *Report of the Wages Committee*, Jerusalem, 1943; *Memorandum Submitted to the Wages Committee by the Jewish Agency for Palestine* (mimeographed by the United Palestine Appeal); G. E. Wood, *Survey of National Income of Palestine*, Jerusalem, 1943 (secret); and *Statistical Bulletin*, January 1945, issued by the Statistical and Information Department of the Histadruth.

This chapter has been prepared by Mr. Daniel Creamer.

CHAPTER 16

The particular importance of the construction industry to the Palestinian economy is set forth very competently in David Horowitz and Rita Hinden, *Economic Survey of Palestine*, 1937, Chapter VI, Background data on prewar Jewish housing was derived from F. Naphtali, *Housing in Jewish Palestine*, Jerusalem, 1938.

The estimates of wage costs and the share of foreign materials in construction were taken from Dr. J. Schlesinger, *The Share of Wages and Foreign Building Materials in the Cost of Construction of Buildings and Roads*, Economic Research Institute of the Jewish Agency, Jerusalem, 1944 (Hebrew). Data on the current density of housing was supplied by Mr. C. Wilson Brown; 1937 data on housing density in Tel Aviv and Haifa and Horowitz and Hinden, *op. cit.*, p. 111. Data on the general quality of housing at present supplied by Mr. Z. Heron, Reconstruction Commissioner, in an interim memorandum on housing, June 30, 1944.

The Government's policy in regard to public building was taken from the

Report of the Committee on Development and Welfare Services, 1940. The estimate of the net return on real estate investments was supplied by Mr. E. Lehman of the General Mortgage Bank. The current proportion of consumer expenditures on rent was taken from the *General Monthly Bulletin of Current Statistics*, Vol. IX, No. 10.

The wartime cost of construction index was taken from Dr. F. Dulberg, "Building and Housing During the Transition Period" in *Bulletin of the Economic Research Institute of the Jewish Agency*, Vol. VIII, second issue, 1945. Cost comparisons between war and prewar of the Haifa Bayside Land Corporation were supplied by Mr. M. Ettinger of that company. Current cost differences between Tel Aviv and Haifa supplied by Mr. H. Foerder, Manager of the Rassco Company.

In addition, we are indebted to the following persons for the background material which they supplied: Mr E. S. Hoofien, Managing Director of the Anglo-Palestine Bank; Mr. D. Hacohen of Solel Boneh; Mr. A. Zabarsky, Manager of the Shikun Company; Mr. J. L. A. Watson, City Engineer of the Haifa municipality; Mr. Y. Shiffman, Municipal Engineer, Tel Aviv; and Mr. J. Reiser, of the Jewish Agency for Palestine.

This chapter was prepared by Mr. Robert R. Nathan, with the assistance of Miss Florence Schoenberg.

CHAPTER 17

General statistical data on transportation have been adapted from various issues of the *Statistical Abstract.* For non-statistical material we have drawn upon several monographic studies. Two in particular have been especially helpful: "Palestine's Transport System: Its Development and Future Possibilities," by Dr. M. Ettinger, and "Summary of the Traffic Problems of Palestine," by B. K. Zipper, both typescripts submitted to the Planning Committee of the Jewish Agency.

We have profited also from a special memorandum on the shipping and fishing industry prepared by B. G. Meerovitch of the Maritime and Fisheries Department of the Jewish Agency for Palestine and from notes of an address given by Mr. A. F. Kirby, General Manager, Palestine Railways, to the War Economic Advisory Council on January 4, 1945.

Detailed statistics relating to the operations of the Jewish transport cooperatives, compiled by J. Schlesinger of the Department of Transportation of the Jewish Agency, have been useful. Informative discussions were held with A. F. Kirby, B. G. Meerovitch, Mr. Beveridge, Manager of the Haifa Port, Mr. Lubarsky, and the officials of TAAN, Hamavir and Egged, motor transport cooperatives.

The only comprehensive statistics on wholesale and retail trade are those for the Jewish community relating to the year 1937 and published in the Census of *Jewish Manufactures, Transportation and Commerce, 1937, op. cit.* These data have been supplemented by the annual reports to the Registrar of Cooperative Societies, the annual reports of Hamashbir Hamerkazi and Tnuva Societies, and a special memorandum prepared by the manager of the Foreign Trade Institute. Discussions with the officials of the last three institutions were helpful. A summary version of a report on trade prepared by Martin Lederman for the Planning Committee of the Jewish Agency was made available. A convenient summary of the activity of cooperative societies engaged in trade during the war years may be found in "The Cooperative Movement in Palestine During the War, 1939-43," by Harry Viteles, published in the *Yearbook of Agricultural Cooperation*, 1939-43, issued by the Horace Plunkett Foundation.

This chapter was prepared by Mr. Daniel Creamer.

CHAPTER 18

For the early beginnings of Jewish labor organization in Palestine and the workers' ideology, we have relied on two studies by Abraham Revusky, *Jews in Palestine* (Vanguard Press, N. Y., 1936) and *The Histadrut* (League for Labor Palestine, N. Y., 1938), and on an account written by David Ben Gurion under the title of *Jewish Labour*, London, Hechalutz organization of England with cooperation of League for Labor Palestine in America, 1935.

Statistics on trade union membership taken from the *Statistical Abstract* (Sicumim) of the General Federation of Labor (Histadruth) and from a special memorandum prepared by Dr. Walter Preuss, Statistician of the Histadruth.

The monograph prepared by Dr. Eva Danelius, *The Industrial Worker in Jewish Palestine*, 1943-44 (mimeographed) for the Planning Committee of the Jewish Agency, is a comprehensive survey of working conditions, terms of collective bargaining and the social insurance schemes operated by the Histadruth. Dr. Gerhard Muenzner provides an equally comprehensive discussion of the entrprises constituting the labour economy in his book, *Jewish Labour Economy in Palestine*, Economic Research Institute of the Jewish Agency for Palestine, Jerusalem, 1943.

Statistical information on Arab trade unions is published in the *Annual Reports* of the Department of Labour of the Palestine Government.

This chapter was prepared by Mr. Daniel Creamer.

CHAPTER 19

An excellent brief statement of the character of the Palestinian monetary system is contained in an unpublished statement of February 1938 by S. Hoofien and F. Naftali, *Problems of Currency and Banking.* A somewhat more detailed account is that of G. Hakim and M. Y. El-Hussayni in *Economic Organization of Palestine* (ed. by S. B. Himadeh), Beirut, 1939. Current information is to be found in the *Economic Report* prepared irregularly by the Anglo-Palestine Bank (unpublished, but made available through the courtesy of Mr. Kurt Mendelsohn). We have also profited from the unpublished memorandum prepared by the Anglo-Palestine Bank on its *Development Activities*, January 1945.

Some of the basic legislation is to be found in: *Legislation of Palestine*, 1918-25, Vol. I, pp. 66, 102, and 180; M. Doukhan (ed.) *Laws of Palestine*, 1926-31, p. 618; *The Palestine Gazette*, October 7, 1937, Supplement No. 1 and October 9, 1941, Supplement No. 1. See also *Report of Palestine Currency Board* (Annual), London.

Information on developments during the 1930's is contained in a series of articles in the *Palnews Economic Annual:* 1936 by S. B. Aharon, 1937 by M. Benenson, 1938 by K. Grunwald, 1939 by S. B. Aharon. We have profited also from an unpublished memorandum on Palestine finances by Kurt Grunwald, dated July 23, 1943. On labor financing, there is Gerhard Muenzner, *Jewish Labor Economy in Palestine*, Tel Aviv, 1943.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 20

Estimates of Palestine's balance of payments for the prewar years had been prepared by the United States Consul in Jerusalem. The Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce kindly made these estimates available. These estimates were adjusted by us in several minor respects. Originally excluded but now included under merchandise imports are immigrants' effects, Iraq Petroleum Company stores, and goods imported for consuls, religious and educational institutions. The only other modification involves the inclusion of immigrants' effects under the category of immigrants' capital. For the war years we have made similar adjustments to the estimated balance of payments prepared by the Government Statistician, Mr. G. E. Wood, and published in his *Survey of National Income of Palestine, op. cit.*

Palestine's prewar commercial policy is discussed in the *Report of the Royal Commission*, 1937; the *Minutes* of the Mandates Commission of the League of Nations, 1938 and 1939; Sa'id Himadeh, *Economic Organization of Palestine;* and David Horowitz, *Aspects of Economic Policy in Palestine.* Wartime regulations of foreign trade and exchange controls were taken from the Palestine Gazette.

Statistics on foreign trade have been adapted from the *Statistical Abstract;* Department of Customs, Excise and Trade, *Statistics of Imports, Exports and Shipping; General Monthly Bulletin of Current Statistics* and *Supplements.* Estimates of physical volume of imports 1939-43 taken from *General Bulletin*, February 1945. Estimates of index of physical volume of exports adapted from special memorandum prepared by Dr. F. Dulberg.

The estimate of capital flow 1919-39 was compiled by us from the following sources:

Capital of Immigrants, 1922-36, from W. Dusterwald, "Foreign Investment in Palestine," *Palnews*, 1937, and from U. S. Consular Reports, Balance of Payments for Palestine, 1936 to 1939; Jewish Funds from *Statistical Abstract of Palestine*; Christian and Moslem Funds, 1922-36, is estimated, based on assumption that contributions during these years were on the average somewhat below £P 300,000 per year; 1937-39 estimates based on balance of payments estimates available for these years; and Foreign Investments, 1922-36 from W. Dusterwald, *op. cit.*; and 1937 to 1939 from U. S. Consular Reports, Balance of Payments for 1936 to 1939. For the years 1919 through 1921 the estimates were arbitrarily derived.

We are grateful to Dr. Kurt Mendelsohn of the Anglo-Palestine Bank, Tel Aviv, and Dr. W. Dusterwald, Economic Bureau of the Jewish Agency, for unpublished memoranda dealing with the volume and problem of the wartime accumulation of sterling balances. We are also indebted to Drs. Hamburger and Loftus for making materials available prior to publication and for discussions clarifying problems of estimation.

This chapter was prepared in final form by Mr. Daniel Creamer. It is a revision of an earlier draft prepared by Mr. Oscar Gass, largely on the basis of materials assembled by Miss Blanche Bernstein.

CHAPTER 21

For basic official data with respect to public finances, see the *Report by the Treasure*, 1927 through 1938-39, *Report on the Accounts and Finances*, 1939-40 through present, and *Draft Estimates of Revenue and Expenditure* (annual).

We have profited greatly from an opportunity to examine fragments of a study of Palestinian public finances being prepared by David Bergmann and Kurt Mendelsohn. More conventional studies of the fiscal system, from various points of view, are contained in the volume edited by S. B. Himadeh cited above and in an unpublished study by C. Nawratski, *Oeffentliche Gelder Palaestines* . . . September 1944. An elementary legal sketch of the income tax is given by Dr. S. Moses, *The Income Tax Ordinance of Palestine*, Jerusalem, 1944.

On local government finances, we are very grateful for special tabulations compiled by Dr. J. Schlesinger, (unpublished, typescript, 1944) and by David Gurevich (unpublished, mimeographed, 1945).

The most thorough essay on the prewar finances of the Jewish national institutions is A. Ulitzur, *Two Decades of Keren Hayesod*, Jerusalem, 1940. Mr. Ulitzur presents annual summaries of Jewish national finances in the *Bulletin* of the Economic Research Institute of the Jewish Agency for Palestine. We are indebted to Mr. Ulitzur for special tabulations on the receipts and expenditures of the Jewish national institutions, the investments of the Keren Hayesod, and the repayments of loans by agricultural settlements. An important aspect of Jewish Agency financing is covered in the pamphlet, *Industrial Activities and Industrial Financing in Palestine*, Jerusalem, 1944.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 22

The sources for this chapter, insofar as it relates to the Jewish population of the world, its survival, condition, and interest in emigration to Palestine, overlap in part with the sources for Part II, Chapter 8 and Part III, Chapter 11. Readers are referred to the notes to those chapters. A valuable guide to the current literature on these and related subjects is provided by the *Contemporary Jewish Record*, bimonthly, N. Y.

A literary account of the social condition of the Jewish Pale in the first three decades of the twentieth century is given by Sholem Asch, *Three* Cities, N. Y., 1933. A scene from the extermination of the 1940's is given in Arthur Koestler's *Arrival and Departure*, 1943, in the account of the Mixed Transport. The literature of the victims, particularly that written in concentration camps and extermination centers is surprisingly voluminous but very scattered. On Jewish survival, we have generally followed the estimates of the Jewish Agency for Palestine, furnished by Mr. Eliahu Dobkin and his staff.

A general account of Jewish displacement, in its European perspective, is given by E. M. Kulischer, *The Displacement of Population in Europe*, Montreal, 1943. Some information on the various Jewish refugee groups and the character of their adaptation to new countries is given in Arieh Tartakower and K. R. Grossman, *The Jewish Refugee*, N. Y., 1944. A particularly thorough monograph, putting the Jewish problem in the general perspective of German policy in Bohemia-Moravia is Gerhard Jacoby, *Racial State*, N. Y., 1944. Such evidence of the condition of Jews in Europe as existed in the summer of 1944 is summarized by Z. Warhaftig, *Relief and Rehabilitation*, N. Y., 1944. All of these books contain elaborate references to earlier and specialized literature. On the position of the Jewish communities of the Middle East, we are indebted for several documents and letters made available to us by the Jewish Agency for Palestine.

On the general problems of immigration into Palestine, we have profited most from several unpublished studies of the Jewish Agency staff, as well as from discussions with members of the Jewish Agency executive and staff. Among the unpublished studies, that by David Horowitz, *A Plan for Transplantation of One Million Jews to Palestine*, August 1944, and that by Ludwig Gruenbaum, *Outlines of a Development Plan for Jewish Palestine*, August-October 1944, have been particularly helpful. The scope of both of these studies far surpasses the bounds of immigrant problems and services, as treated in our chapter.

The special problems of the immigration of children orphaned or separated from their parents is given an historical introduction by Norman Bentwich, *Jewish Youth Comes Home*, London, 1944. There are also published descriptive and financial reports on the activities of the Youth Aliyah, from 1934 through 1943, issued by the Jewish Agency, Jerusalem. For the Youth Aliyah's present plans and problems, our most valuable guide has been an unpublished memorandum of February 1, 1945, by Mr. Hans Beyth. We have also profited greatly from several opportunities for discussion with Mr. Beyth and from seeing Youth Aliyah activities under his guidance. The breadth of view, systematic organization talent, and continuing interest in the children of the Youth Aliyah as individuals, of which Mr. Beyth gave evidence in all our contacts, inspire great confidence.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 23

The statement of R. F. Jardine, water Commissioner of Palestine, on additional irrigable area is found in the Proceedings of the *Conference on Middle East Agricultural Development*, Cairo, February 7-10, 1944, Middle East Supply Center, Agricultural Report No. 6.

The so-called "Mekoroth Plan" is contained in the report *The Water Resources of Palestine, Prospects for Irrigation and Hydro-Electric Development.* Mekoroth Water Co., Ltd., Tel Aviv, May 1944, 104 pp. The short-term scheme of this company is contained in a typewritten report dated January 1945.

The plans of the Commission on Palestine Surveys are as yet not available in printed form. The successive revisions of the plan have been made available to us through the courtesy of Mr. James B. Hays.

The plans of the Palestine Economic Corporation are also unpublished as yet. The long-term plan (contained in a memorandum to the Planning Committee of the Jewish Agency in May 1944); the short-term plan entitled "The Rapid Extension of Irrigation in Palestine" (first stage of a country-wide irrigation system), January 1945; and the so-called "Litani Scheme" of September 1943, were made available to us through the courtesy of various members of the staff of the Palestine Economic Corporation.

Data on the Huleh Reclamation Project was derived from a *Report on Huleh Soils* by Dr. S. Ravikovitch of the Rehovoth Agricultural Research Station, and the *Report of the Committee on Development and Welfare Services*, Government of Palestine, 1940, pp. 24-27. Estimate of land now under irrigation in the Huleh area made by Dr. A. Werber.

For average costs of irrigation in the United States see United States Department of the Interior, Bureau of Reclamation, *Reclamation Handbook, Conservation Bulletin No. 32.* Construction costs per KW on the Tennessee Valley Authority were obtained from the TVA office in Washington, D. C. The cost of generation facilities at Boulder Dam was taken from the *Annual*

Report of the Secretary of the Interior, 1941; data on Missouri River Basin costs are from *Missouri River Basin, Report of the Secretary of the Interior on the Bureau of Reclamation Plan for Development*, April 1944.

We are also grateful to the following persons for their valuable discussion of these issues: Dr. M. J. Goldschmidt, of the Government's Department of Irrigation; Messrs. E. Borochov and M. Sitz, of the Water Research Bureau; Professor J. Breuer of the Haifa Technical Institute; Messrs. I. Vilentchuk and P. Moskowitz, of the Palestine Water Company; Messrs. I. Shapiro and A. Ruttenberg, of the Palestine Electric Corporation; Messrs. A. Prag and Ch. Halperin, of the Agricultural Workers' Union; Dr. A. Werber and Mr. S. Blass.

This chapter was prepared by Mr. Robert R. Nathan, with the assistance of Miss Florence Schoenberg.

CHAPTER 24

The notes and acknowledgments under Chapter 14 are also in large part relevant to this chapter.

Current information on the Palestine citrus industry is contained in the special section of the *Palestine Tribune* (weekly) edited by Mr. Isaac Rokach. We have profited from discussion of the problems of Palestine citrus with Mr. Rokach, Mr. Traub of Tnuva Export, Mr. S. Tolkowsky of the Citrus Control Board, Mr. L. Pinner of the Jewish Agency, and Mr. M. H. Sachs. An unpublished memorandum by Dr. Ludwig Samuel, *Some Remarks on the Development of the Citrus Market After the War*, January 1, 1945, proved very suggestive. In the field of export specialties other than citrus, pioneer thinking is embodied in a brief unpublished paper by Mr. M. H. Sachs, *Memorandum on the Future of Agriculture in Palestine*, January 1, 1945. We have also profited from a brief discussion of these questions with Dr. Y. Carmon at the Rehovot Experiment Station.

In the field of domestic agricultural marketing, we are most dependent on the thorough work of Dr. Ludwig Samuel, as presented in many unpublished papers and oral discussions. The papers which were most useful include: *Suggestions Concerning a Decrease in the Cost of Living*, March 1945; *Statement on Agricultural Policy for the Transition Period*, November 2, 1944; *Jewish Mixed Farming During the Transition Period*, April 20, 1944; *Agriculture and Colonisation Policy*, December 1944; *The Jewish Vegetable Market in Palestine* (published), Rehovot, 1942; and *Principal Questions Concerning the Development of Mixed Farming . . .* (undated). Also of service were I. E. Volcani, *Planned Mixed Farming*, Rehovot, 1938, and three mimeographed *Studies on Agricultural Planning* by the same author.

We are grateful for the opportunity to study the unpublished investigations of the Jewish National Fund on land use, ownership, and intensification possibilities. Messrs. Joseph Weitz and S. Lifschitz of the Jewish National Fund, gave us generously of their time and knowledge. Mr. Weitz has given a summary of this approach in his book on *Palestine's potentialities* (1944, Hebrew, Jerusalem), of which an English translation has been promised. We have also profited from an unpublished memorandum by Dr. S. Ravikovich, *The Saline Soils of the Lower Jordan Valley and the Problem of Their Reclamation*, July 1942.

A most valuable approach was suggested in the paper by S. Zemach, *Plan for the Development of Agricultural Settlemen* and by the larger unpublished studies shown us by Messrs. Zemach and Khasonov at Rehovot.

A very searching paper on labor utiliaztion in collective farming is the text of an address by Dr. J. Loewe, January 24, 1945, on *Cheapening Production in Kvutza Economy.* On the general problem of labor training in agriculture, we are indebted for valuable discussions with Dr. L. Pinner.

This chapter was prepared by Mr. Oscar Gass.

CHAPTER 25

The source of the statistical materials that serve as the point of departure are clearly indicated in the text of this chapter. The principal informational bases for the personal judgments are several: One very important source was the 23 monographs (mimeographed), analyzing the problems and prospects of 23 different branches of manufactures, prepared for and under the supervision of the Subcommittee for Industrial Planning of the Planning Committee of the Jewish Agency for Palestine. The authors were selected because of their specialized knowledge of particular industry.

Equally valuable were field visits to several scores of factories and workshops in Jerusalem, Tel Aviv, Haifa, the environs of these three cities, Nablus and Majdal. From these visits it was possible to obtain firsthand impressions on general factors affecting efficiency and on the quality of the output. Of more importance perhaps was the opportunity to discuss the problems of a given industry with the managements of representative enterprises. We are very grateful to all these officials for their courtesy and cooperation. We are also deeply obligated to Dr. Alfred Marcus, economist for the Manufacturers' Association of Palestine, Mr. Gideon Strauss and Mr. Benjamin, both of the Anglo-Palestine Bank, and Mr. Mark Ettinger of Bayside Land Corporation for their gracious cooperation in arranging for factory visits and for permitting us to draw freely upon their large funds of knowledge of Palestine's industry.

The third principal basis was discussion with specialists and economists unattached to manufacturing firms. The list is too long for specific enumeration. However, we should be unduly remiss if we did not acknowledge our indebtedness to Hans Ludwig, Kurt Grunwald, David Horowitz, Harry Wolfshon, E. Ehrenfeld, Erwin Wittkowski, and E. Koenig. The methodology and conclusions, needless to say, are the sole responsibility of the authors.

This chapter was prepared by Mr. Daniel Creamer.

CHAPTER 26

The findings on housing requirements of the Central Committee of Arabs and Jews under the chairmanship of C. Wilson Brown, the Controller of Heavy Industries, is contained in the *Interim* Memorandum on Housing, June 30, 1944, prepared by Z. Heron, the Reconstruction Commissioner. As indicated in the text, extensive use has been made of the memorandum of Mr. H. L. Lifschitz, of the Bizur Company in building up the construction requirements of new immgrants.

Mr. C. Wilson Brown supplied the list of materials for the 27,000-room program classified by products to be imported entirely and products to be manufactured locally of imported materials.

Mr. J. Bawli, of the Manufacturers' Association supplied estimates on the possibilities of expanding the present capacity for producing building materials. The estimates of capacity to produce building materials for 60,000 rooms are contained in the *Preliminary Report* (*Part 1*) of the Research Committee for Economy in Building of the Association of Engineers and Architects.

This chapter was prepared by Mr. Robert R. Nathan, with the assistance of Miss Florence Schoenberg.

CHAPTER 27

Our remarks on commercial policy have profited from the reading of a monograph on *Customs Policy* (mimeographed) prepared by Dr. Alfred Marcus for the Planning Committee of the Jewish Agency for Palestine and from discussion with Dr. Mueller of the Department of Trade and Industry of the Jewish Agency.

The monographs enumerated in the notes to Chapter 17 were also useful in preparing this section on the prospects of transportation and Communication.

Our discussion of the prospects of the Jewish medical profession is based in large part on the findings of Prof. Robert Bachi reported in his memorandum, "Statistics on Physicians in Palestine," to the Central Bureau of Medical Statistics, Jerusalem, 1943.

Mr. W. Turnowsky's analysis of the tourist industry is both perspicacious and reasonable. His report (mimeographed) to the Planning Committee of the Jewish Agency as well as our conversations with Mr. Turnowsky were very helpful.

This chapter was prepared by Mr. Daniel Creamer.

CHAPTER 28

We are grateful for the opportunity to examine a confidential study of import prices, prepared by a Government Committee at the end of 1944, made available to us by the courtesy of Mr. J. V. W. Shaw, Chief Secretary of the Palestine Government. We have profited also from the opportunity to study a memorandum on *Import Policy and Adjustment of the Price Level*, prepared by Dr. Kurt Mendelsohn for the Planning Committee of the Jewish Agency. On labor's attitude towards wage and price policy, we have benefited greatly from a discussion with Mr. David Remez and Miss Golda Meyerson.

On all monetary, banking, and financial questions, our greatest indebtedness is to Mr. S. Hoffien of the Anglo-Palestine Bank. He has graciously answered many questions for us, both in writing and in oral discussion. We are also indebted for a memorandum of September 1944 prepared by A. Bonne and E. Bromberger and for a memorandum of December 1944 by A. Bonne on *The Finance of Jewish Reconstruction.*

The most searching paper has come to our attention on the Palestine aspects of reparations is *The Jewish Claim Against Germany*, by S. Hoofien, January 23, 1944. On the general issue, a valuable treatment is *Indemnification and Reparations, Jewish Aspects*, by Nehemiah Robinson, N. Y., 1944.

This chapter was prepared by Mr. Oscar Gass.

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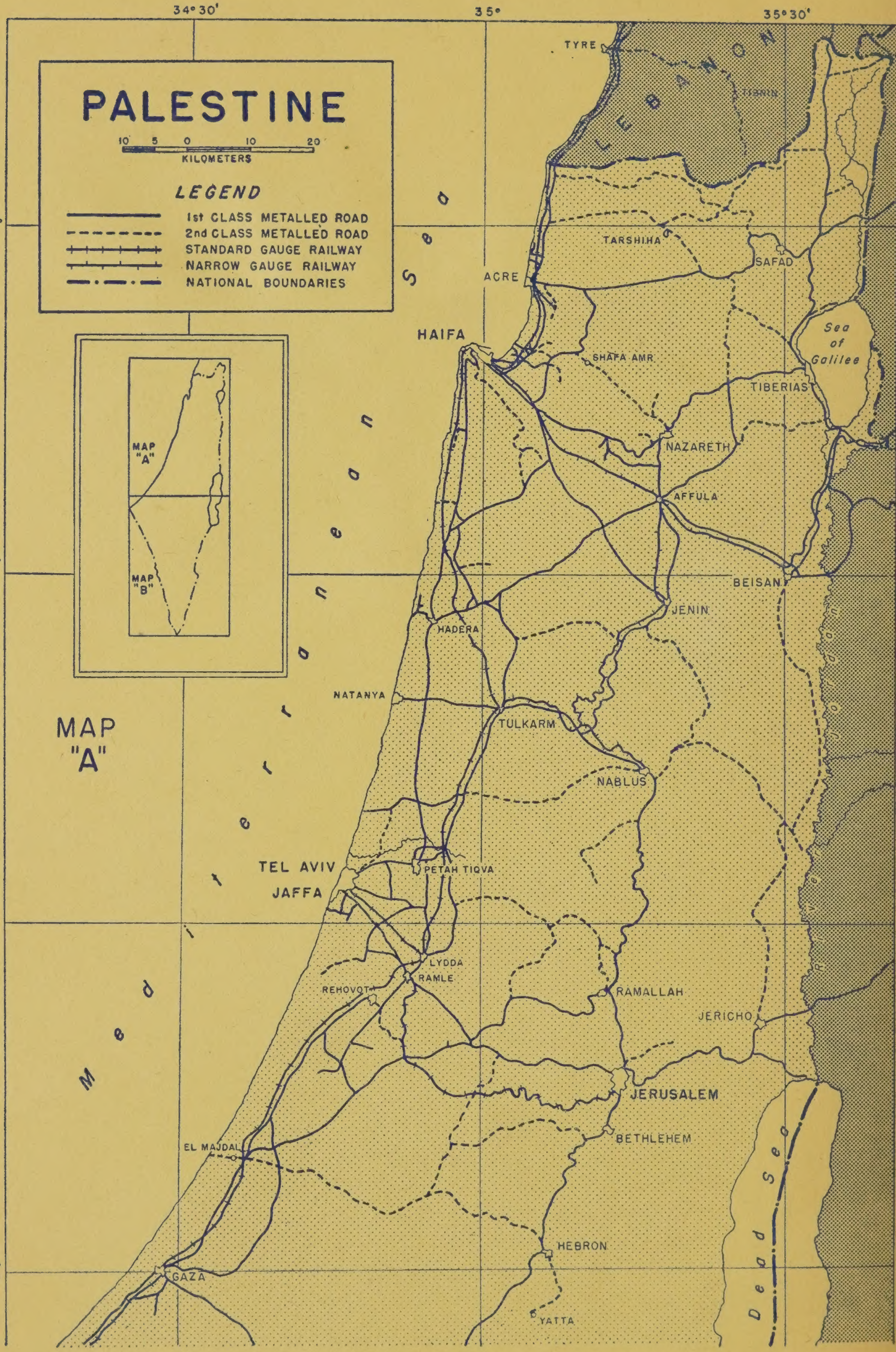

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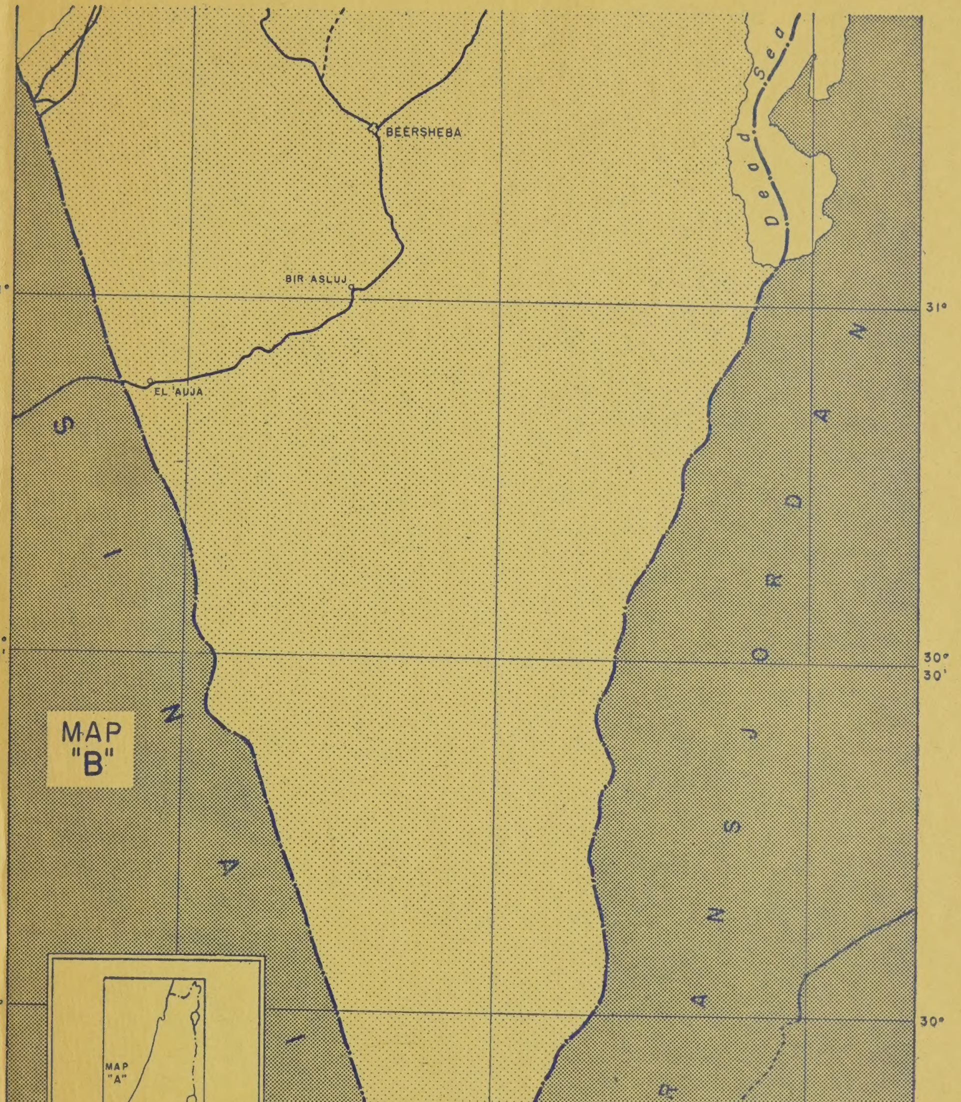MAP "B"
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